JVC

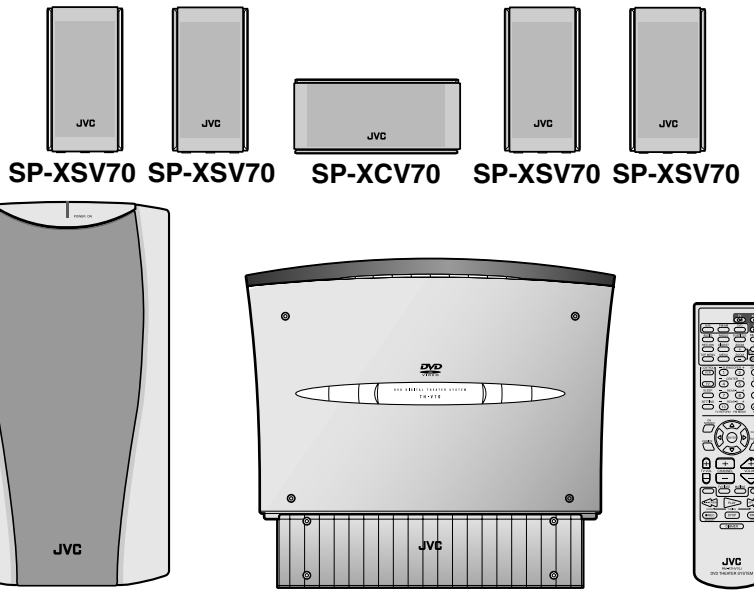
SERVICE MANUAL

DVD DIGITAL THEATER SYSTEM

TH-V70

Area suffix

J ---------- U.S.A.
C ---------- Canada



SP-XSV70 SP-XSV70 SP-XCV70 SP-XSV70 SP-XSV70

SP-PWV70 XV-THV70

AV COMPU LINK Digital Direct Progressive Scan

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No.21089
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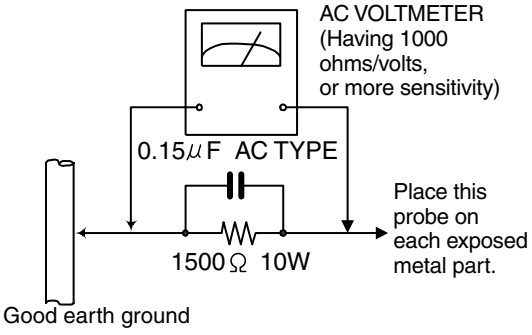
Safety Precautions

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer`s warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Voltage measured any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

⚠ CAUTION

Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of preforming repair of this system.

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (▬), diode (▬) and ICP (●) or identified by the "⚠" mark nearby are critical for safety.
(This regulation does not correspond to J and C version.)

Preventing static electricity

1. Grounding to prevent damage by static electricity

Electrostatic discharge (ESD), which occurs when static electricity stored in the body, fabric, etc. is discharged, can destroy the laser diode in the traverse unit (optical pickup). Take care to prevent this when performing repairs.

2. About the earth processing for the destruction prevention by static electricity

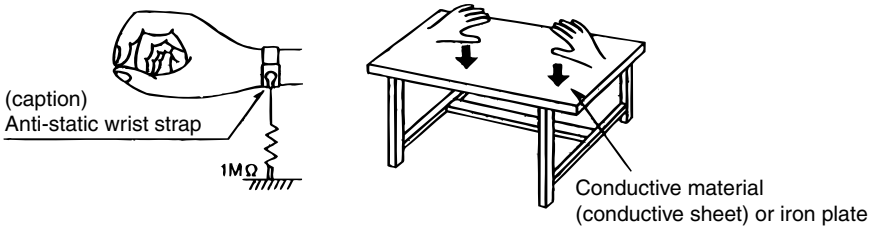
Static electricity in the work area can destroy the optical pickup (laser diode) in devices such as DVD players.
Be careful to use proper grounding in the area where repairs are being performed.

2-1 Ground the workbench

Ground the workbench by laying conductive material (such as a conductive sheet) or an iron plate over it before placing the traverse unit (optical pickup) on it.

2-2 Ground yourself

Use an anti-static wrist strap to release any static electricity built up in your body.



3. Handling the optical pickup

1. In order to maintain quality during transport and before installation, both sides of the laser diode on the replacement optical pickup are shorted. After replacement, return the shorted parts to their original condition. (Refer to the text.)

2. Do not use a tester to check the condition of the laser diode in the optical pickup. The tester's internal power source can easily destroy the laser diode.

4. Handling the traverse unit (optical pickup)

1. Do not subject the traverse unit (optical pickup) to strong shocks, as it is a sensitive, complex unit.

2. Remove solder of the short lands on the flexible wire after replacing the optical pickup. For specific details, refer to the replacement procedure in the text. Remove the anti-static pin when replacing the traverse unit. Be careful not to take too long a time when attaching it to the connector.

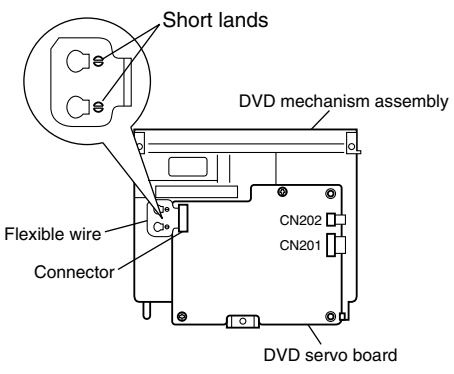
3. Handle the flexible wire carefully as it may break when subjected to strong force.

4. It is not possible to adjust the semi-fixed resistor that adjusts the laser power. Do not turn it.

5. Attention when traverse unit is decomposed

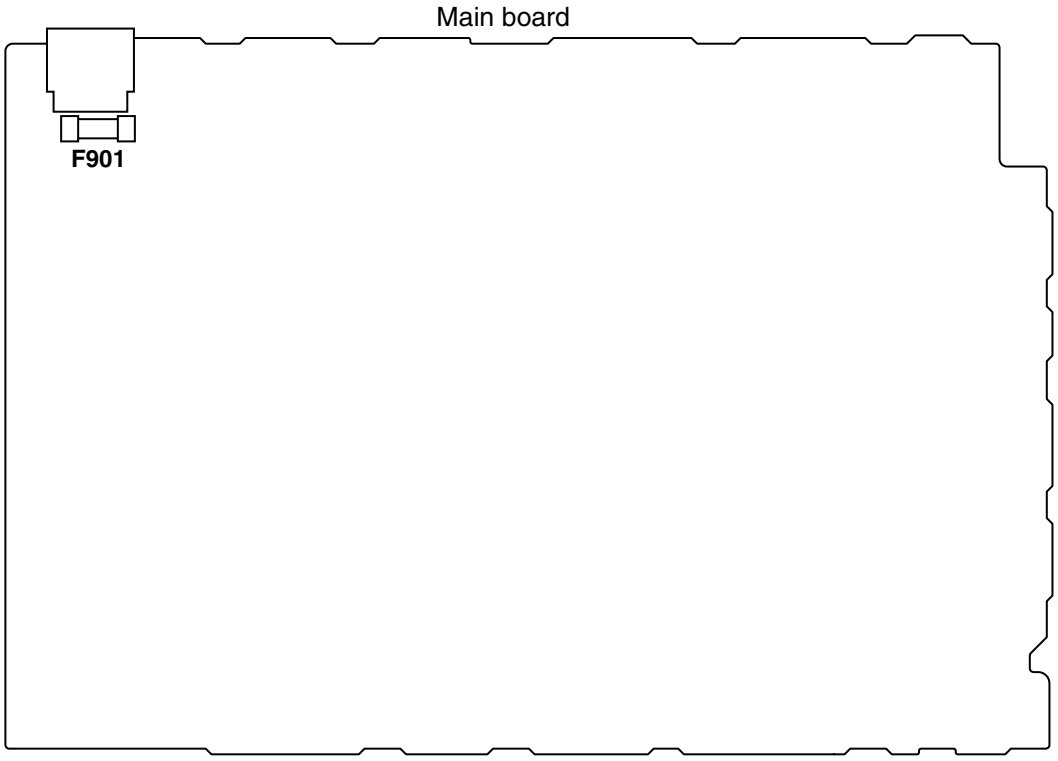
***Please refer to "Disassembly method" in the text for the DVD pickup unit.**

- Apply solder to the short lands before the flexible wire is disconnected from the connector on the DVD servo board.
  (If the flexible wire is disconnected without applying solder, the DVD pickup may be destroyed by static electricity.)
- In the assembly, be sure to remove solder from the short lands after connecting the flexible wire.



Importance administering point on the safety

<Main body section>



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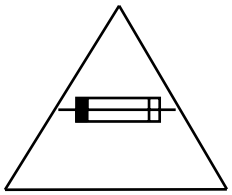
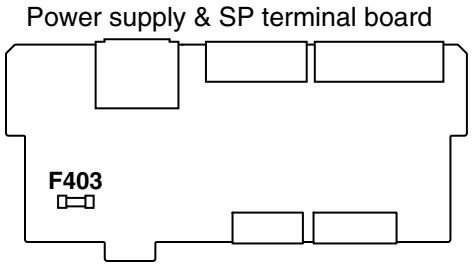
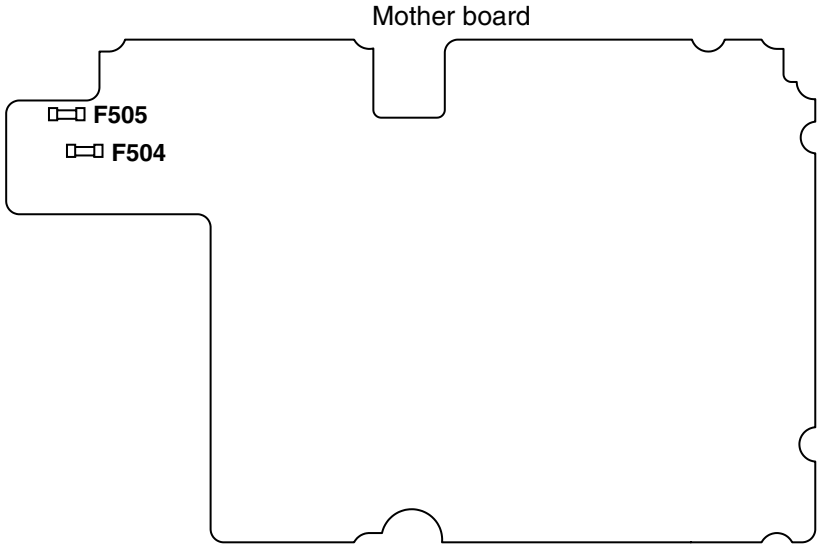


Caution: For continued protection against risk of fire, replace only with same type 1.6A/125V for F901. This symbol specifies type of fast operating fuse.

Précaution: Pour eviter risques de feux, remplacez le fusible de sureté de F901 comme le meme type que 1.6A/125V.
Ce sont des fusibles sûretes qui functionnes rapide.

<Speaker section>





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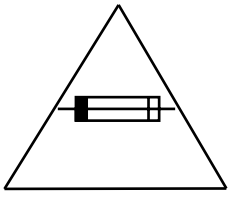


Caution: For continued protection against risk of fire, replace only with same type 4A/125V for F403, 8A/125V for F504, 8A/125V for F505.
This symbol specifies type of fast operating fuse.

Précaution: Pour eviter risques de feux, remplacez le fusible de sureté de F403 comme le meme type que 4A/125V, F504 comme le meme type que 8A/125, et 8A/125V pour F505.
Ce sont des fusibles sûretes qui functionnes rapide.

Disassembly method

<Main body section>

■ Removing the top plate (See Fig. 1.)

From the top side of the main body, remove the four screws **A** attaching the top plate.

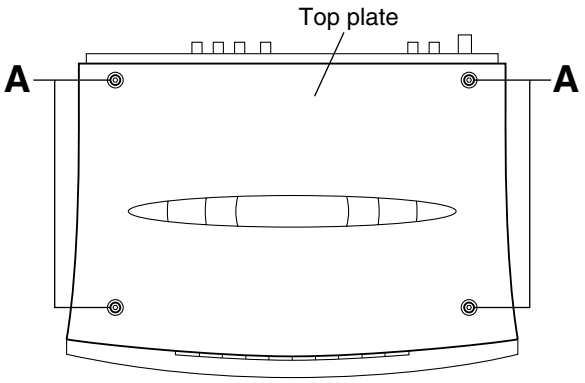


Fig.1

■ Removing the bottom panel

(See Figs. 2 and 3.)

1. From the rear side of the main body, remove the three screws **B** attaching the bottom panel.
2. From the bottom side of the main body, remove the two screws **C** attaching the bottom panel.
3. Remove the bottom panel in an upward direction.

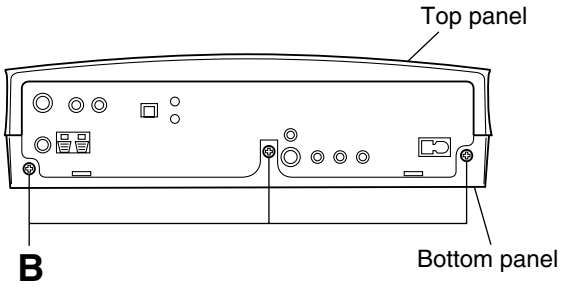


Fig.2

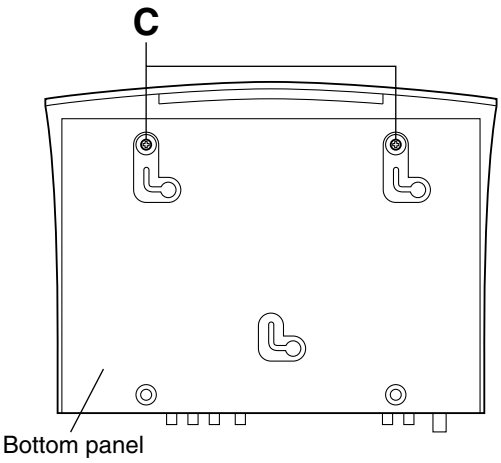


Fig.3

■ Removing the top panel (See Fig. 4.)

- Remove the top plate.
- Remove the bottom panel.

1. Slide the top panel toward the rear (direction of the arrow) and disengage it from the engagement sections **a** and **b** of the bottom chassis.
2. Remove the top panel in an upward direction.

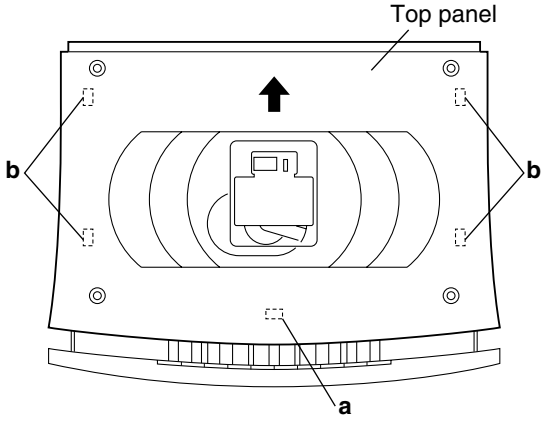


Fig.4

■ Removing the DVD mechanism assembly (See Figs. 5 and 6.)

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.

1. From the top side of the main body, disengage the claw **c** of the DVD mechanism assembly and then remove the push button.

2. Remove the five screws **D** and screw **E** attaching the DVD mechanism assembly.

3. Disconnect the wire from connector CN812 on the LED board.

4. Disconnect the connectors CN502 and CN503 on the DVD servo board from connectors CN801 and CN803 on the main board while lifting the DVD mechanism assembly in an upward direction.

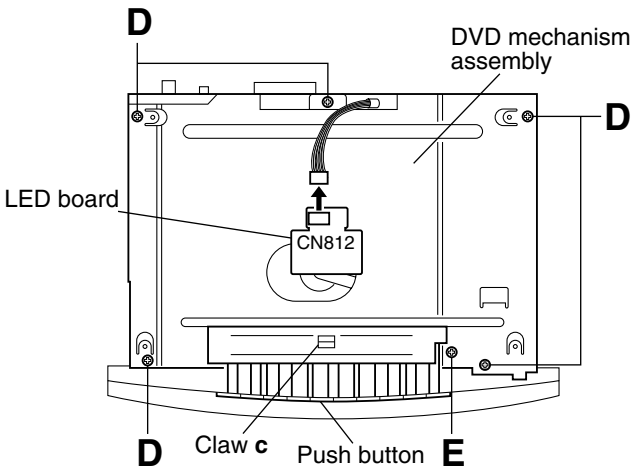


Fig.5

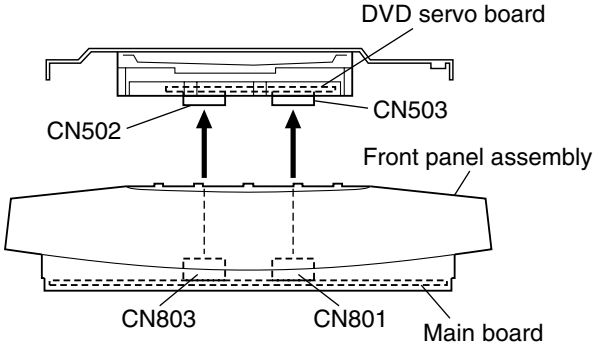


Fig.6

■ Removing the front panel assembly (See Figs. 7 and 8.)

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.
- Remove the DVD mechanism assembly.

1. Remove the wire clamp bundling the wires of the front panel assembly.

2. Remove the card wire of the front panel assembly from the wire holder.

3. Disconnect the wires from connectors CN106 and CN814 on the main board.

4. Disconnect the card wires from connectors CN802 and CN813 on the main board.

5. From the front side of the main body, remove the two screws **F** attaching the front panel assembly.

6. Disengage the claws **d** of the front panel assembly from the bottom chassis and then remove the front panel assembly in the direction of arrow.

[Reference]
- **Before attaching the front panel assembly, pass the card wire of the front panel assembly through the hole on the bottom chassis.**
- **After attaching the front panel assembly, bundle the wires and card wire of the front panel assembly using a wire clamp.**

[Caution]
- **In the assembly, arrange the wires and wire clamp so that they are not touch to the regulator IC(IC953).**

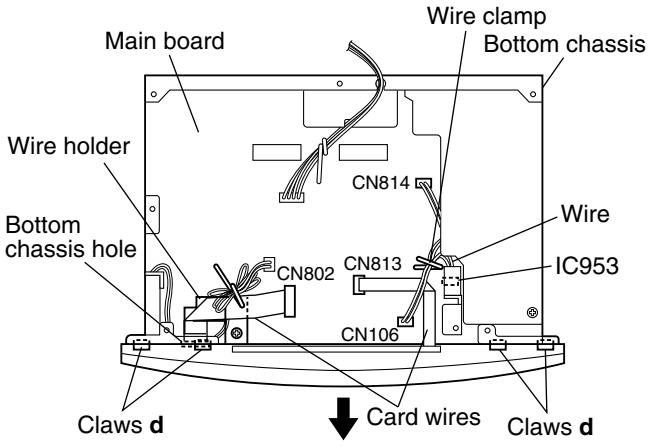


Fig.7

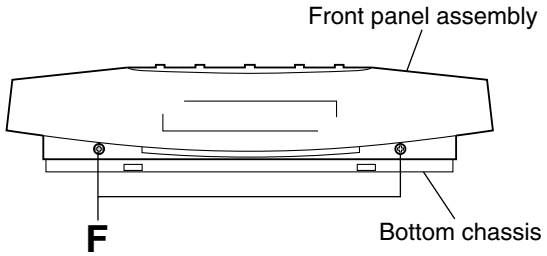


Fig.8

■ Removing the DSP/Audio board

(See Figs. 9 and 10.)

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.
- Remove the DVD mechanism assembly.

1. From the top side of the main body, remove a screw **G** attaching the DSP/Audio board.

2. From the rear side of the main body, remove the screw **H** and two screws **J** attaching the DSP/Audio board.

3. Take out the DSP/Audio board from the bottom chassis and then disconnect the card wire from connector CN806 on the main board.

[Reference]
- **Before attaching the DSP/Audio board, connect the card wire to the connector CN806 on the main board.**

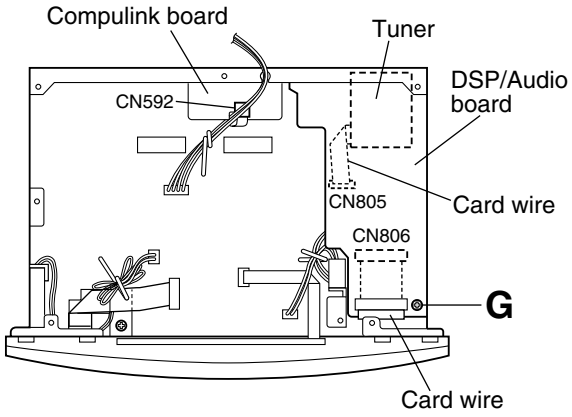


Fig.9

■ Removing the compulink board

(See Figs. 9 and 10.)

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.
- Remove the DVD mechanism assembly.

1. Disconnect the card wire from connector CN592 on the compulink board.

2. From the rear side of the main body, remove the screw **K** attaching the compulink board.

3. Take out the compulink board from the bottom chassis.

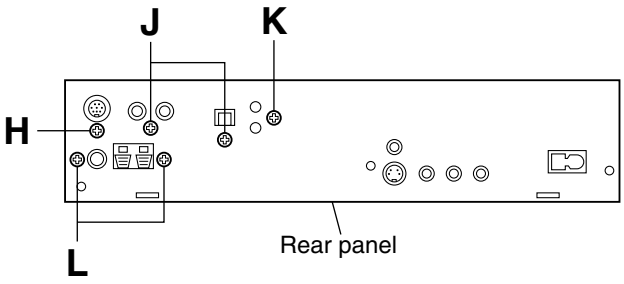


Fig.10

■ Removing the tuner

(See Figs. 9 and 10.)

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.
- Remove the DVD mechanism assembly.

1. Disconnect the card wire from connector CN805 on the main board.

2. From the rear side of the main body, remove the two screws **L** attaching the tuner.

3. Take out the tuner from the bottom chassis.

■ Removing the main board

(See Figs. 11 and 12.)

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.
- Remove the DVD mechanism assembly.
- Remove the front panel assembly.
- Remove the DSP/Audio board.

1. Disconnect the card wire from connector CN805 on the main board.
2. Remove the wire clamp bundling the fan motor wire and then disconnect the wire from connector CN972 on the main board.
3. Disconnect the card wire from connector CN592 on the compulink board.
4. Remove the five screws **M** and screw **M'** attaching the main board.
5. From the rear side of the main body, remove the three screws **N** attaching the main board.
6. Remove the rear panel with the tuner and compulink board.
7. Take out the main board from the bottom chassis.

[Reference] Attaching the main board
- **When attaching the screw M', attach the wire holder together with it.**
- **After connecting the wires to the connectors, bundle them using the wire clamp.**
- **Insert the DVD mechanism assembly wire into the notch on the bottom chassis. (See Fig. 11.)**

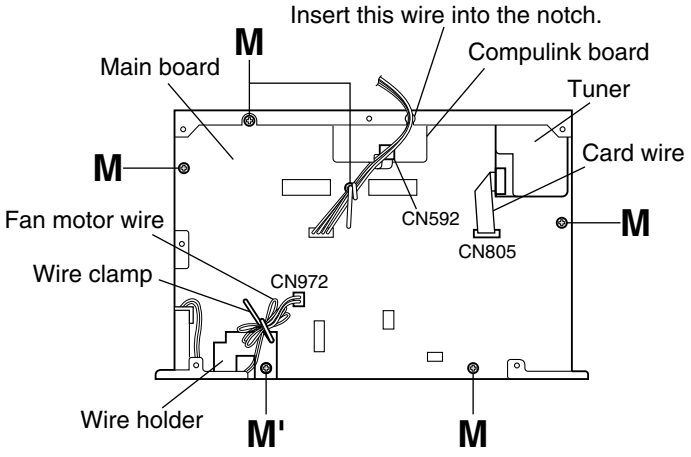


Fig.11

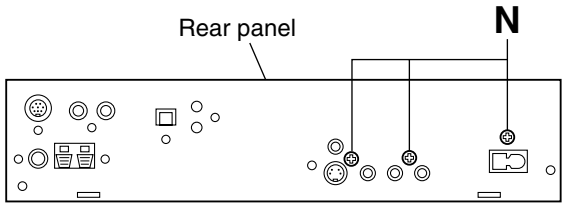


Fig.12

■ Removing the fan motor

(See Figs. 13 and 14.)

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.
- Remove the DVD mechanism assembly.

1. Remove the wire clamp and tie band bundling the fan motor wire.
2. Disconnect the wire from connector CN972 on the main board.
3. From the left side of the main body, remove the two screws **P** attaching the fan motor.

[Reference]
- **After mounting the fan motor, bundle the fan motor wire using the wire clamp.**

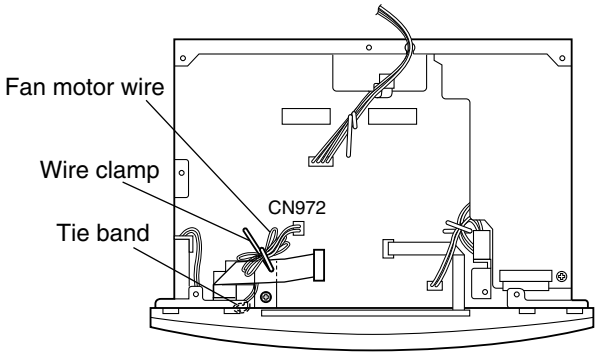


Fig.13

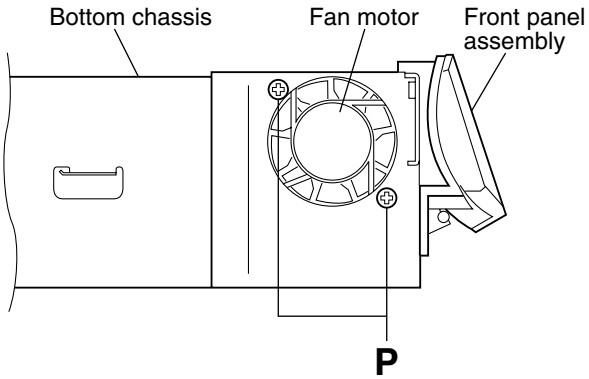


Fig.14

<Front panel assembly section>

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.
- Remove the DVD mechanism assembly.
- Remove the front panel assembly.

■ Removing the switch board

(See Fig. 15.)

From the back side of the front panel assembly, remove the four screws **Q** attaching the switch board.

■ Removing the open/close board

(See Figs. 15 and 16.)

1. From the back side of the front panel assembly, remove the two screws **R** attaching the door motor assembly.

2. Remove the screw **S** attaching the open/close board of the door motor assembly.

■ Removing the door motor (See Fig. 16.)

- Remove the door motor assembly.

1. Remove the stop washers attaching the clutch assembly and gear 2.

2. Remove the clutch assembly, washer and Gear 2.

3. Remove the two screws **T** attaching the door motor.

■ Removing the front board

(See Figs. 17 to 20.)

1. While widening section **e** of the front base in the direction of the arrow, remove the rod gear assembly.

2. Slide the moving panel assembly all the way in the direction of the arrow.

3. While slightly widening sections **f** toward the front, take out the moving panel assembly in the direction of the arrow.

4. Remove the two screws **W** attaching the moving base of the moving panel assembly.

5. Disengage the engagement sections **g** on the inside of the moving base and at the inside of the moving panel assembly and remove the moving base.

6. Remove the two screws **X** attaching the front board.

7. Disengage the claws **h** of the moving panel and remove the front board.

[Reference]
- **Before attaching the moving base, pass the card wire of the front board through the hole on the moving base. (See Fig.19.)**

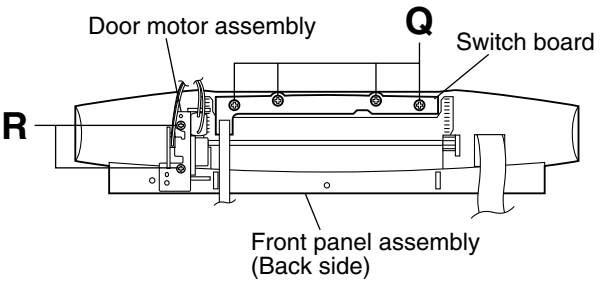


Fig.15

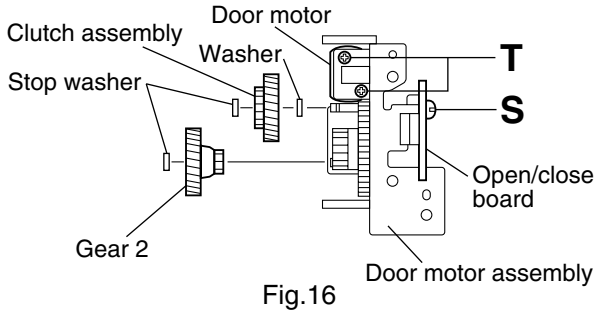


Fig.16

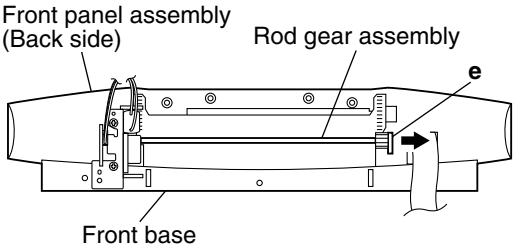


Fig.17

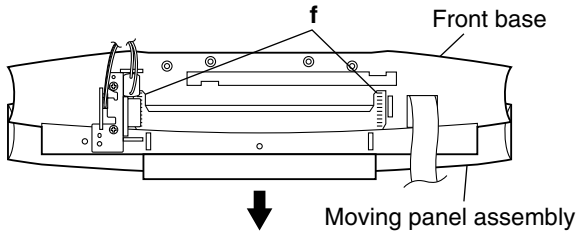


Fig.18

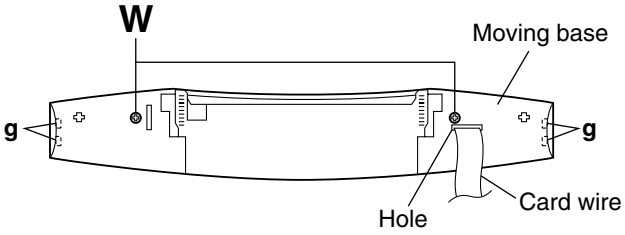


Fig.19

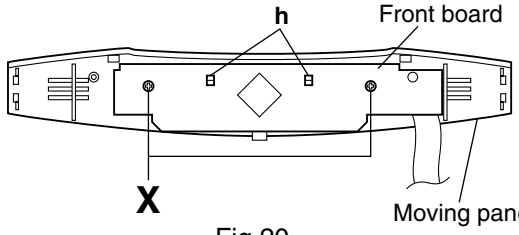


Fig.20

<DVD mechanism assembly section>

- Remove the top plate.
- Remove the bottom panel.
- Remove the top panel.
- Remove the DVD mechanism assembly.

■ Removing the LED board (See Fig. 1.)

From the top side of the DVD mechanism assembly, disengage the claw **a** of the top chassis attaching the LED board and then remove the LED board.

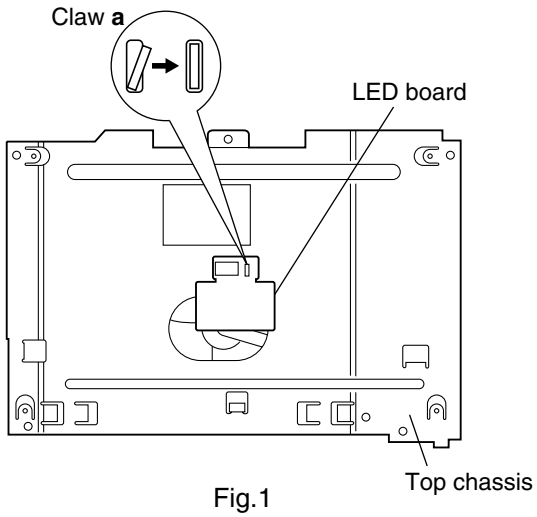


Fig.1

■ Removing the DVD mechanism assembly (See Fig. 2.)

1. Extend the both sides of the protector, and then raise the protector in the direction of arrow.

2. Remove the three screws **A** attaching the DVD mechanism assembly on the top chassis.

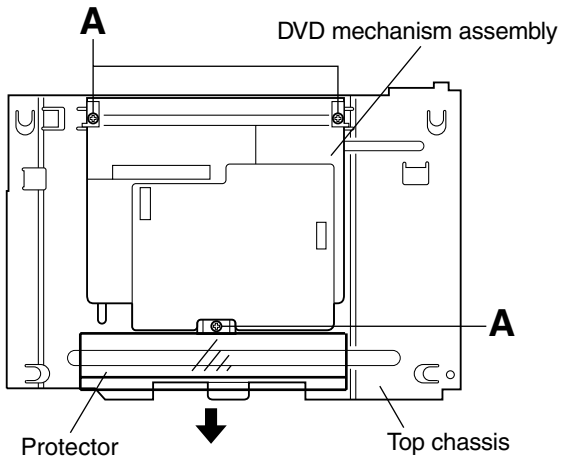


Fig.2

■ Removing the DVD servo board (See Fig. 3.)

[Caution] · Be sure to solder the short land sections b on the flexible wire before disconnecting the flexible wire from connector CN101 on the DVD servo board.
If the flexible wire is disconnected without attaching solder, the pickup unit may be destroyed by static electricity.

1. From the back side of the DVD mechanism assembly, attach solder to the short land sections **b** of the flexible wire that is connected to the connector CN101 of the DVD servo board.

2. Disconnect the flexible wire from connector CN101 on the DVD servo board.

3. Disconnect the card wires from connectors CN201 and CN202 on the DVD servo board.

4. Remove the two screws **B** attaching the DVD servo board.

5. While pushing the claw **c** of the DVD mechanism assembly in the direction of the arrow, remove the DVD servo board from the projections **d** and **e** in an upward direction.

[Caution] · In the assembly, be sure to remove solder from the short land sections b after connecting the flexible wire.

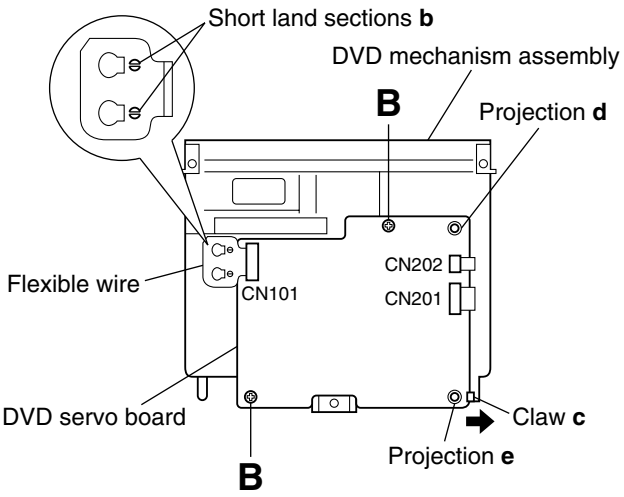


Fig.3

■ Removing the DVD traverse mechanism assembly (See Fig. 4.)

- Remove the DVD servo board.

1. Remove the two screws **C** attaching the DVD traverse mechanism assembly.
2. Disengage the claw **f** attaching the DVD traverse mechanism assembly and then take out the DVD traverse mechanism assembly.

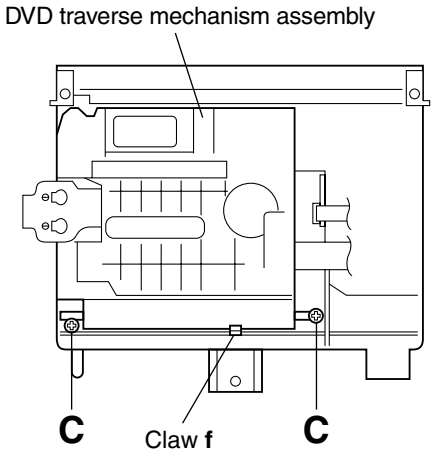


Fig.4

■ Removing the DVD pickup unit (See Figs. 5 to 7.)

- Remove the DVD servo board.
- Remove the DVD traverse mechanism assembly.

1. From the top side of the DVD traverse mechanism assembly, remove the screw **D** attaching the bracket.
2. Remove the claw **g** attaching the thrust spring and then take out the torsion spring.
3. Remove the lead screw from the section **h** and then remove the shaft from the section **i**.
4. Disengage the section **j** of the DVD pickup unit and then remove the DVD pickup unit with the shaft.
5. Pull the shaft out of the DVD pickup unit.
6. Remove the two screws **E** attaching the SW. actuator.

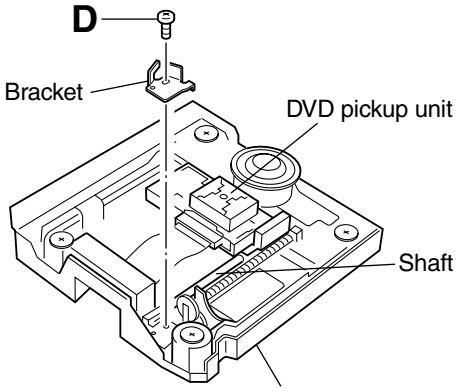


Fig.5

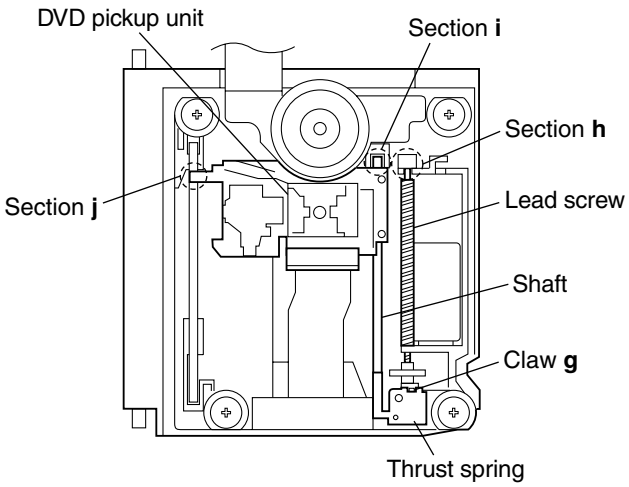


Fig.6

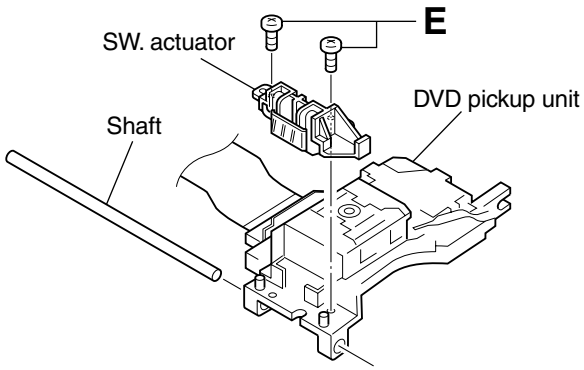


Fig.7

■ Attaching the DVD pickup unit

(See Figs. 5 to 9.)

[Reference]
Refer to the explanation of "Removing the DVD pickup unit" on the preceding page.

1. Attach the SW. actuator and shaft to the DVD pickup unit. **(See Fig.7.)**
2. Engage the section **j** of the DVD pickup unit to the shaft of the DVD traverse mechanism assembly first, and set the both ends of the shaft of the DVD pickup unit in the sections **i** and **i'** of the DVD traverse mechanism assembly.
3. Slide the DVD pickup unit all the way in the direction of the arrow.
4. Mesh the lead screw to the section **k** of DVD pickup unit and then set the end of the lead screw to the section **h**.
5. Attach the thrust spring. **(See Fig.6.)**
6. Attach the bracket. **(See Fig.5.)**

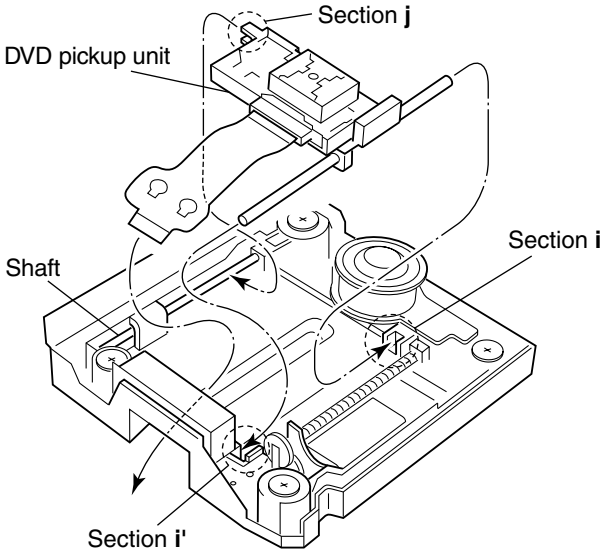


Fig.8

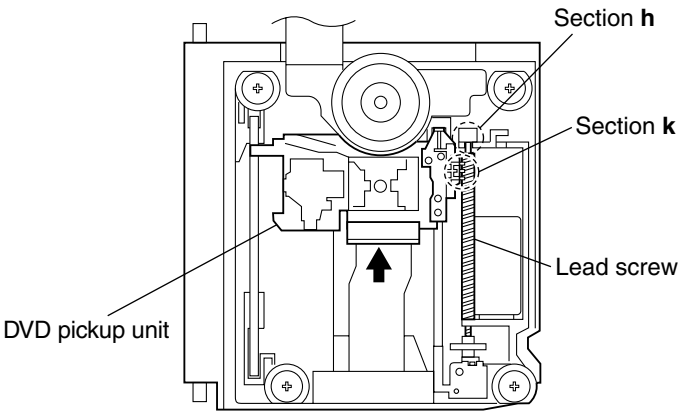


Fig.9

■ Removing the spindle motor board

(See Figs. 10 and 11.)

- Remove the DVD servo board.
- Remove the DVD traverse mechanism assembly.

1. From the top side of the DVD traverse mechanism assembly, remove the feed motor wire that is soldered to the spindle motor board.
2. From the back side of the DVD traverse mechanism assembly, remove the three screws **F** attaching the spindle motor board.

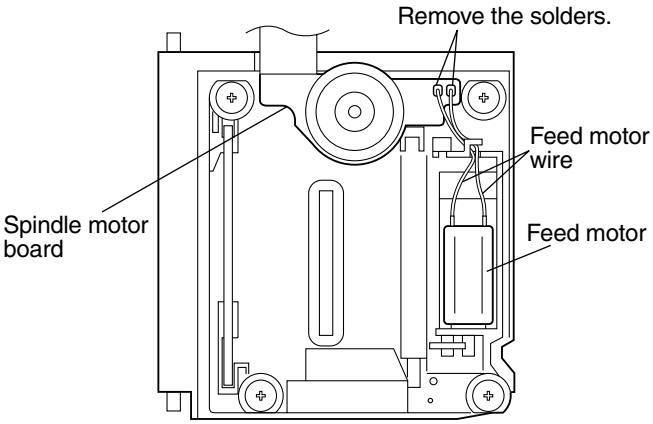


Fig.10

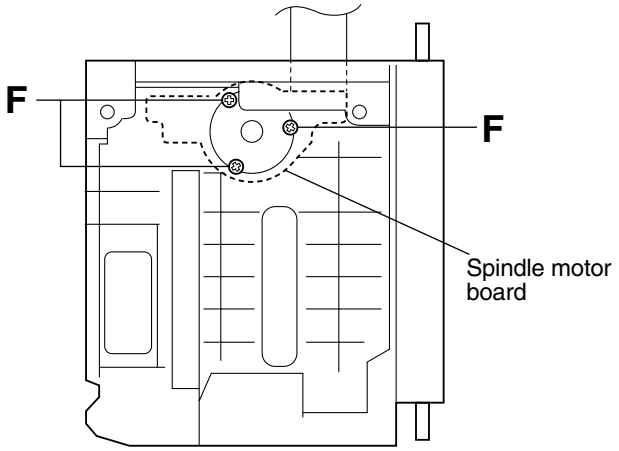


Fig.11

■ Removing the feed motor

(See Figs. 12 to 14.)

- Remove the DVD servo board.
- Remove the DVD traverse mechanism assembly.

1. Remove the four screws **G** attaching the traverse mechanism assembly.
2. Take out the traverse mechanism assembly from the mechanism base.
3. Remove the screw **D** attaching the bracket and take out the bracket.
4. Disengage the claw **g** attaching the thrust spring and take out the thrust spring.
5. Pull out the lead screw in the direction of arrow.
6. Remove the feed gear M.
7. Remove the feed motor wire that is soldered to the spindle motor board.
8. Remove the two screws **H** attaching the feed motor and take out the feed motor.

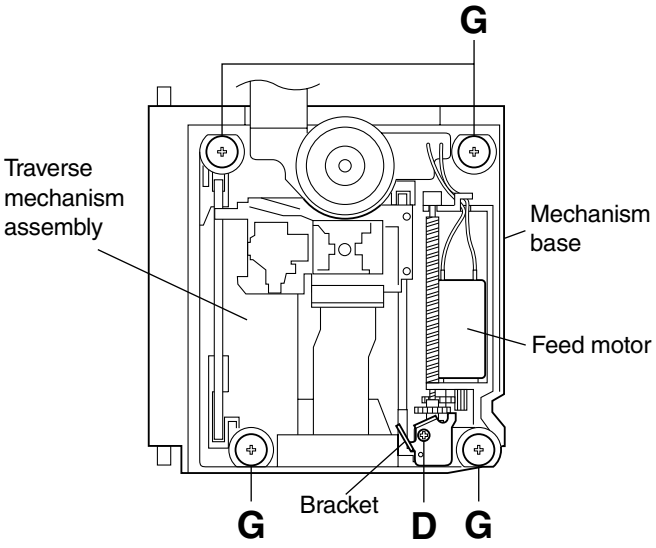


Fig.12

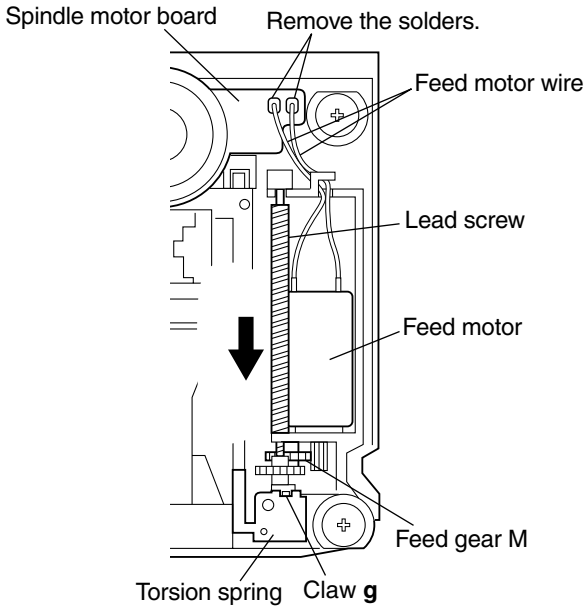


Fig.13

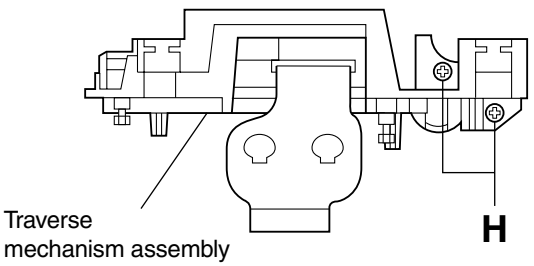


Fig.14

■ Removing the switch board

(See Fig.15.)

- Remove the DVD mechanism assembly.

1. From the top side of the CD mechanism assembly, remove the screw **J** attaching the switch board.

2. Lift the switch board slightly and then remove the wire from connector CN101 on the switch board.

■ Removing the loading motor assembly

(See Figs.3, 15 to 17.)

- Remove the DVD mechanism assembly.

1. From the back side of the DVD mechanism assembly, disconnect the card wire from connector CN202 on the DVD servo board. **(See Fig.3.)**

2. From the top side of the CD mechanism assembly, remove the two screws **K** attaching the clamper base assembly.

3. Disconnect the wire from connector CN101 on the switch board while lifting the clamper base assembly slightly and remove the clamper base assembly.

4. Remove the three screws **L** attaching the roller holder assembly and take out the roller holder assembly.

5. Disconnect the wires from connectors CN103 and CN104 on the loading motor assembly.

6. Remove the belt of the loading motor assembly.

7. Remove the two screws **M** attaching the loading motor assembly and take out the loading motor assembly.

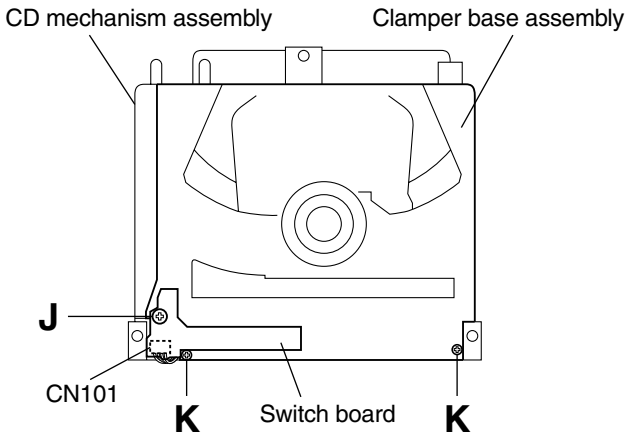


Fig.15

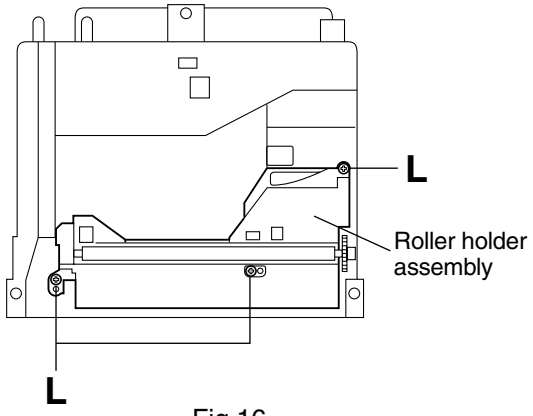


Fig.16

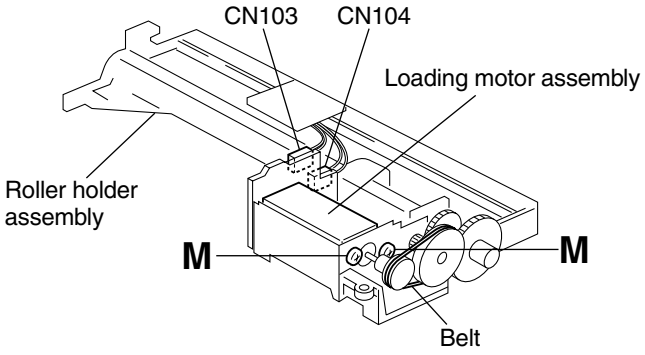


Fig.17

<Speaker section>

■ Removing the amplifier assembly

(See Figs. 1 and 2.)

1. From the rear side of the speaker main body, remove the four screws **A** attaching the heat sink cover and then remove the heat sink cover.

2. Remove the eight screws **B** attaching the amplifier assembly.

3. Move the amplifier assembly backward and disconnect the wire from connector CN109 in the lower part of the amplifier assembly.

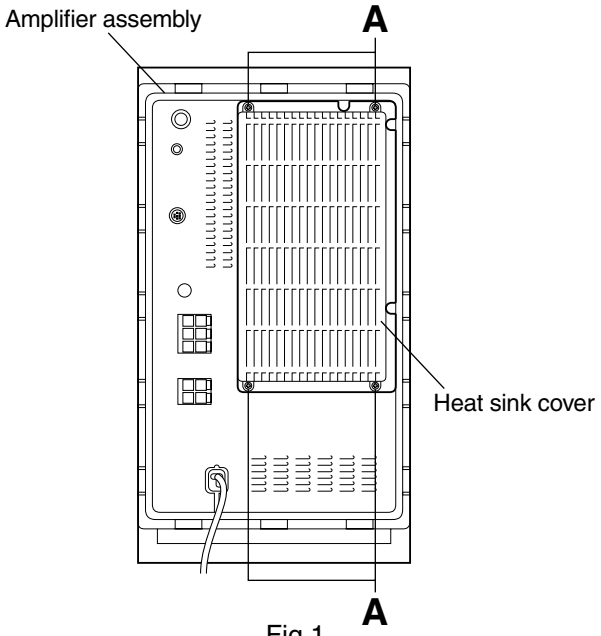


Fig.1

■ Removing the rear panel (See Fig. 3.)

- Remove the amplifier assembly.

1. Pull out the knob.

2. Remove the ten screws **C**, ten screws **D** and screw **E** attaching the rear panel.

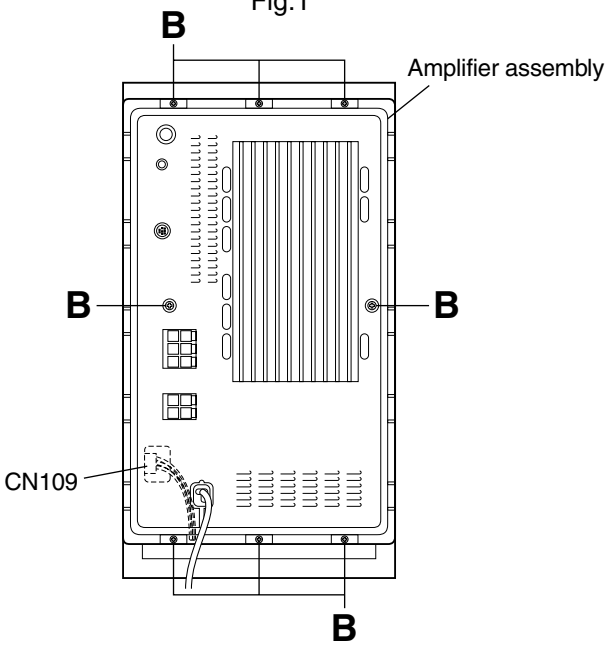


Fig.2

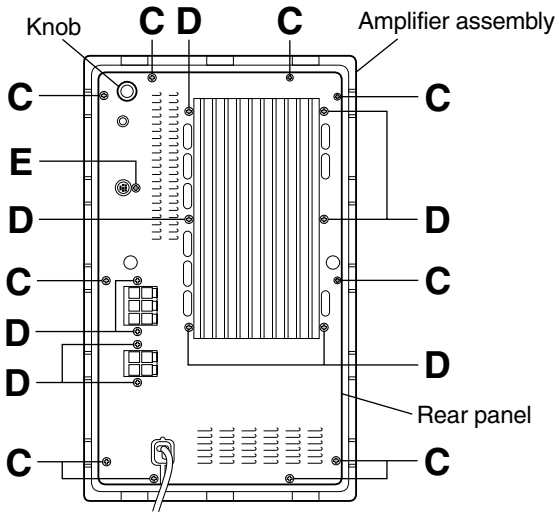


Fig.3

■ Removing the pre-amplifier board

(See Figs. 4 to 6.)

- Remove the rear panel.

1. Remove the two screws **F** attaching the volume bracket.
2. Disconnect the pre-amplifier board from the connector CN201 on the mother board and take out the pre-amplifier board.
3. Pull out the push button.
4. Remove the two screws **G** and nut attaching the volume bracket.

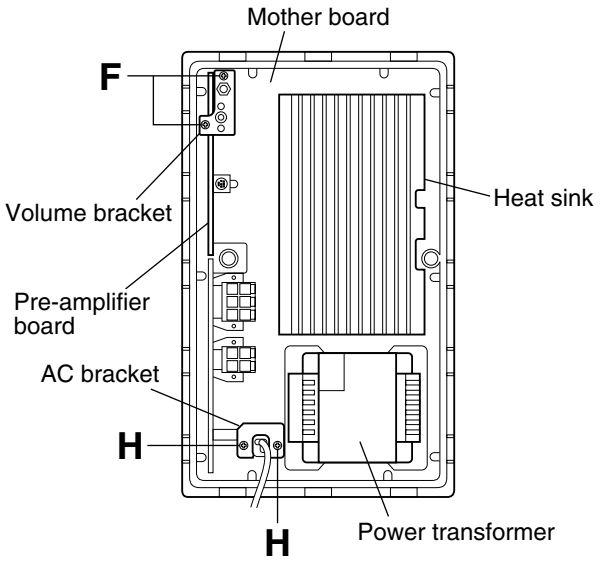


Fig.4

■ Removing the power supply & SP terminal board

(See Figs. 4 and 5.)

- Remove the rear panel.

1. Remove the two screws **H** attaching the AC bracket.
2. Disconnect the power supply & SP terminal board from the connectors CN210 and CN211 on the mother board.
3. Disconnect the wire from connector CN107 on the power supply & SP terminal board.
4. Disconnect the power cord from connector CN108 on the power supply & SP terminal board.

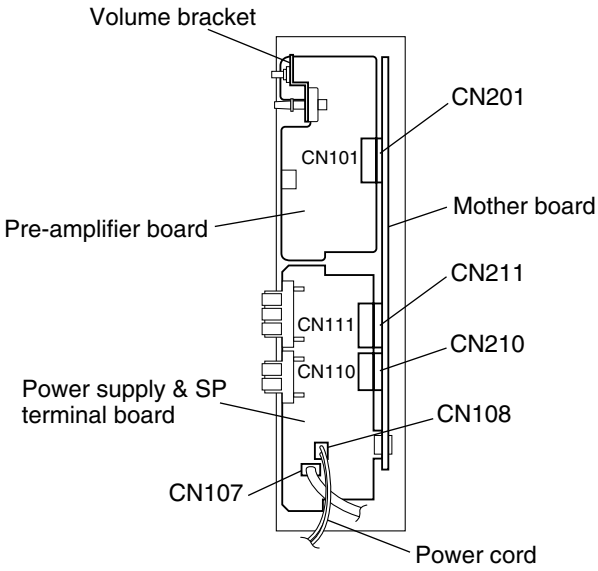


Fig.5

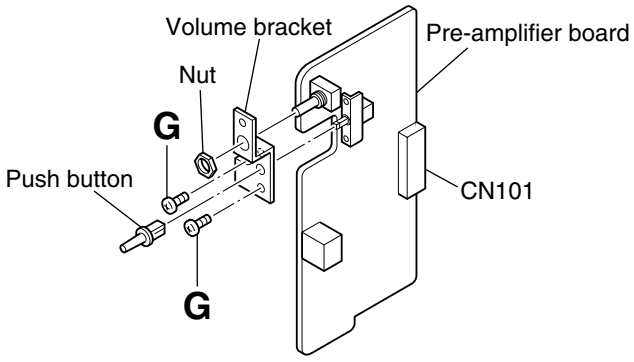


Fig.6

■ Removing the mother board

(See Figs. 7 and 8.)

- Remove the rear panel.
- Remove the pre-amplifier board.
- Remove the power supply & SP terminal board.

1. Disconnect the wire from the connector CN104 on the mother board.

2. Remove the seven screws **J** attaching the mother board.

3. Take out the mother board with the power amplifier board (A,B).

4. From the bottom side of the mother board, remove the two screws **K** and two screws **L** attaching the power amplifier board (A,B).

5. Remove the power amplifier board (A,B) from connectors CN202, CN203, CN205 and CN206 on the mother board.

■ Removing the power amplifier board (A)

(See Figs. 9 and 10.)

- Remove the mother board.

1. Remove the four screws **M** attaching the heat sink to the power amplifier board (A).

2. From the bottom side of the power amplifier board (A), disengage the four engagement sections **a**.

3. From the top side of the power amplifier board (A), slide the P.TR holder (A) in the direction of the arrow to disengage the engagement section **b** and remove the power amplifier board (A) from the P.TR holder (A).

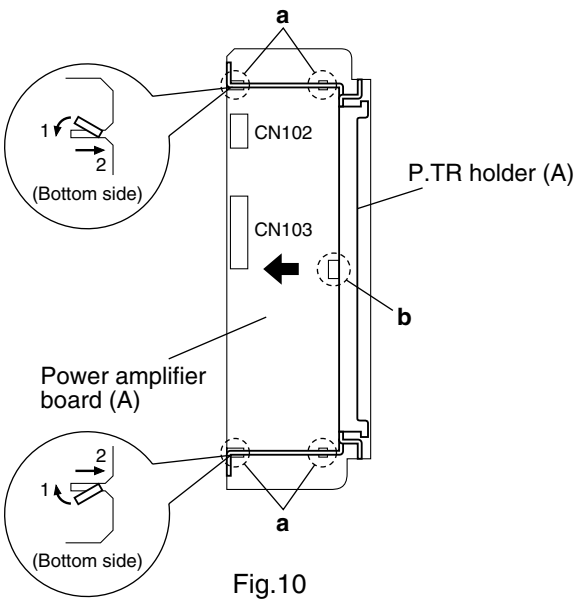


Fig.10

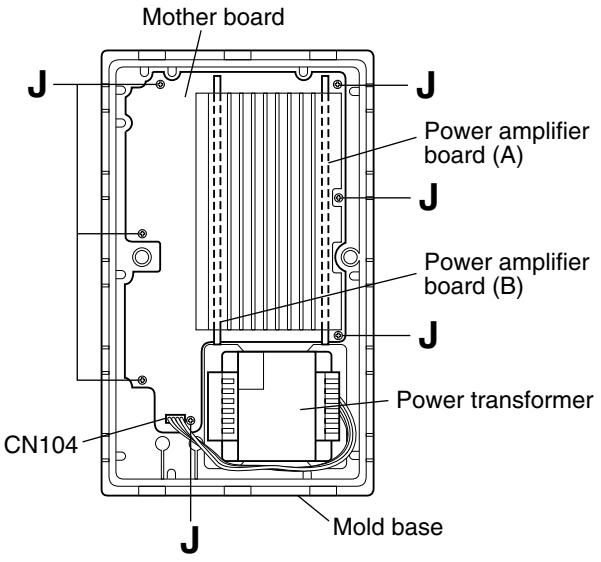


Fig.7

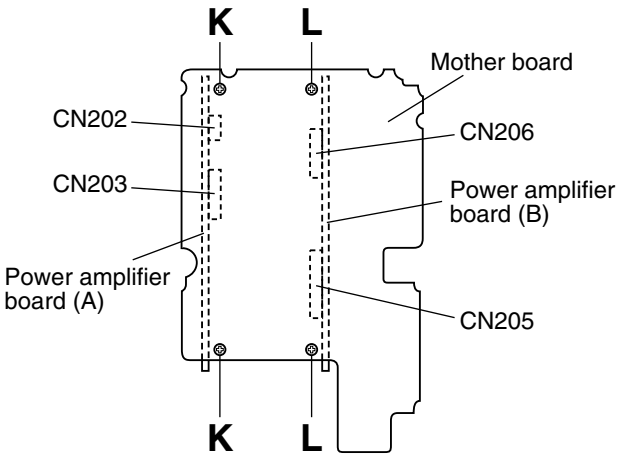


Fig.8

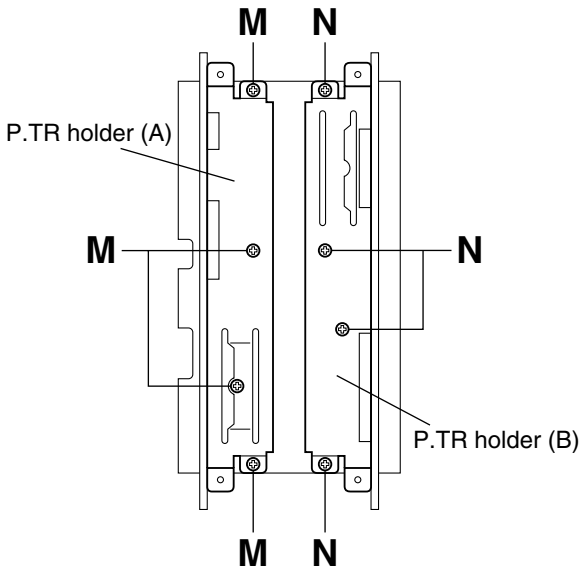


Fig.9

■ Removing the power amplifier board (B) (See Figs. 9 and 11.)

- Remove the mother board.

1. Remove the four screws **N** attaching the heat sink to the power amplifier board (B). **(See Fig.9.)**

2. From the bottom side of the power amplifier board (B), disengage the four engagement sections **c**.

3. From the top side of the power amplifier board (B), slide the P.TR holder (B) in the direction of the arrow to disengage the engagement section **d** and remove the power amplifier board (B) from the P.TR holder (B).

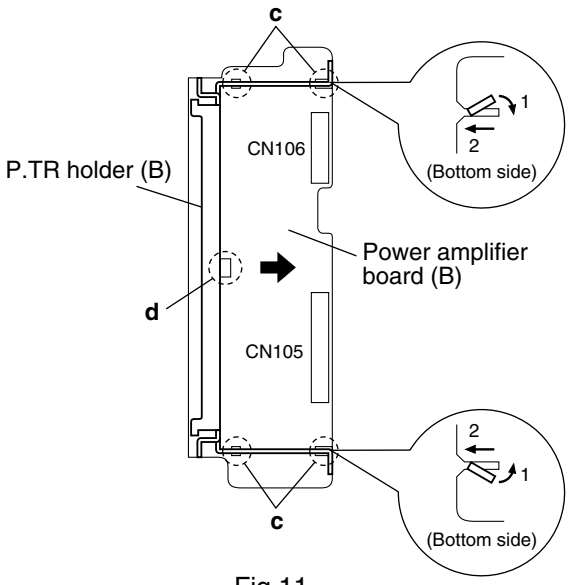


Fig.11

■ Removing the power transformer (See Figs. 12 and 13.)

- Remove the rear panel.

1. Remove the wire from the connector CN104 on the mother board.

2. Disconnect the wire from the connector CN107 on the power supply & SP terminal board.

3. Remove the four screws **P** attaching the power transformer and then remove the power transformer from the transformer bracket of the mold base.

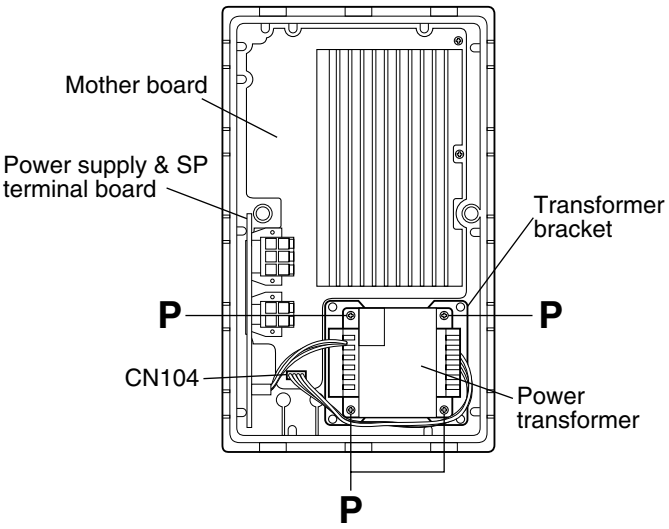


Fig.12

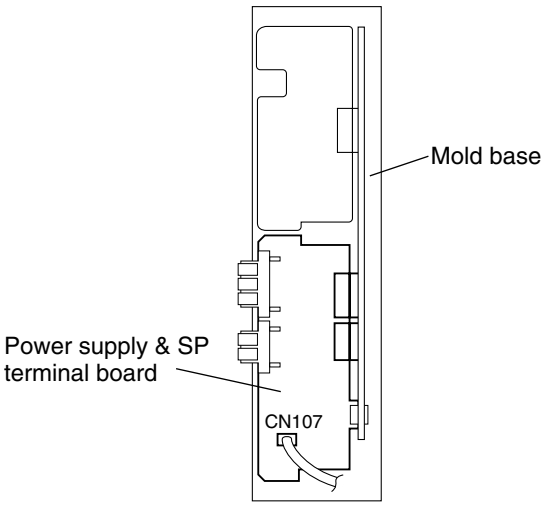


Fig.13

■ Removing the LED indicator

(See Figs. 14 to 16.)

1. Insert the tip of a flat-bladed screwdriver or a similar tool into the space between the speaker main body and the ornament panel (the section indicated by the arrows), and lift the net little by little to remove.

[Note]	**To prevent damaging the ornament panel and speaker main body, insert cushioning plates etc. above and below the tip of the flat-bladed screwdriver or a similar tool.**

2. From the back side of the ornament panel, remove the two screws **Q** attaching the LED indicator.

3. Disconnect the wire from connector CN109 on the LED indicator.

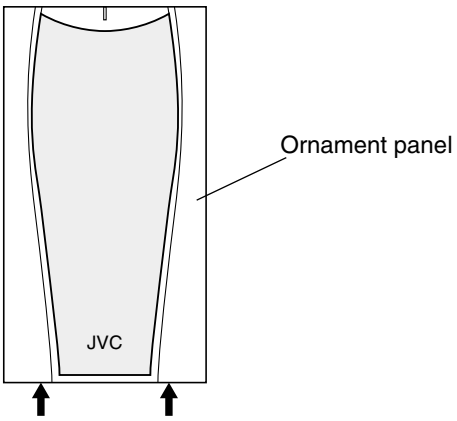


Fig.14

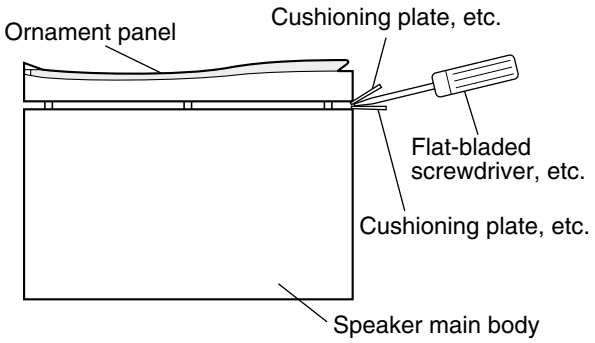


Fig.15

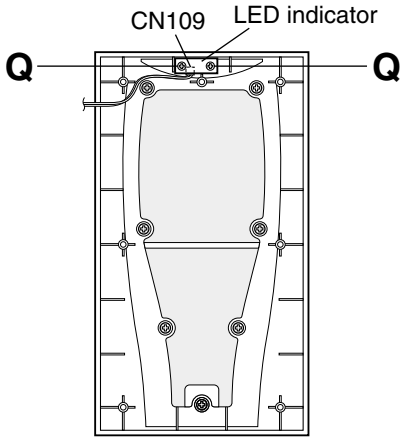


Fig.16

■ Removing the speaker

(See Figs. 17 and 18.)

1. Remove the eight screws **R** attaching the speaker.

2. Take out the speaker.

3. Disconnect the wires from the terminals of the speaker.

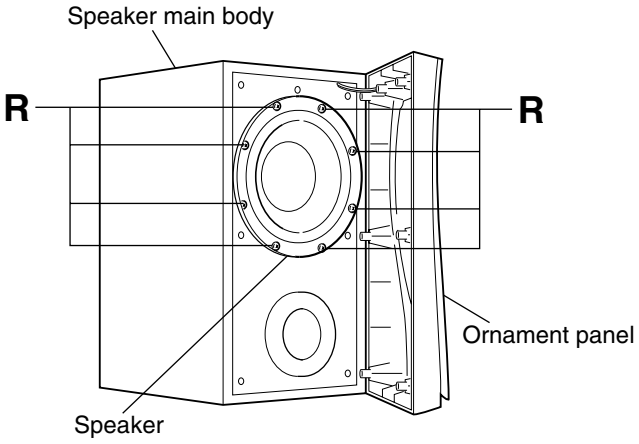


Fig.17

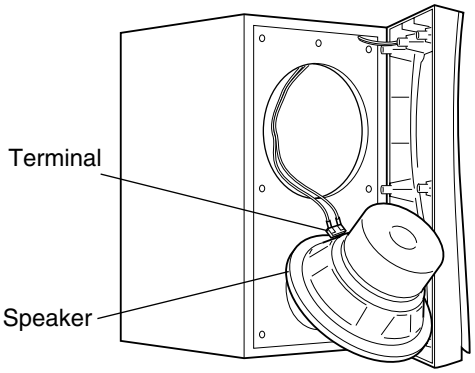
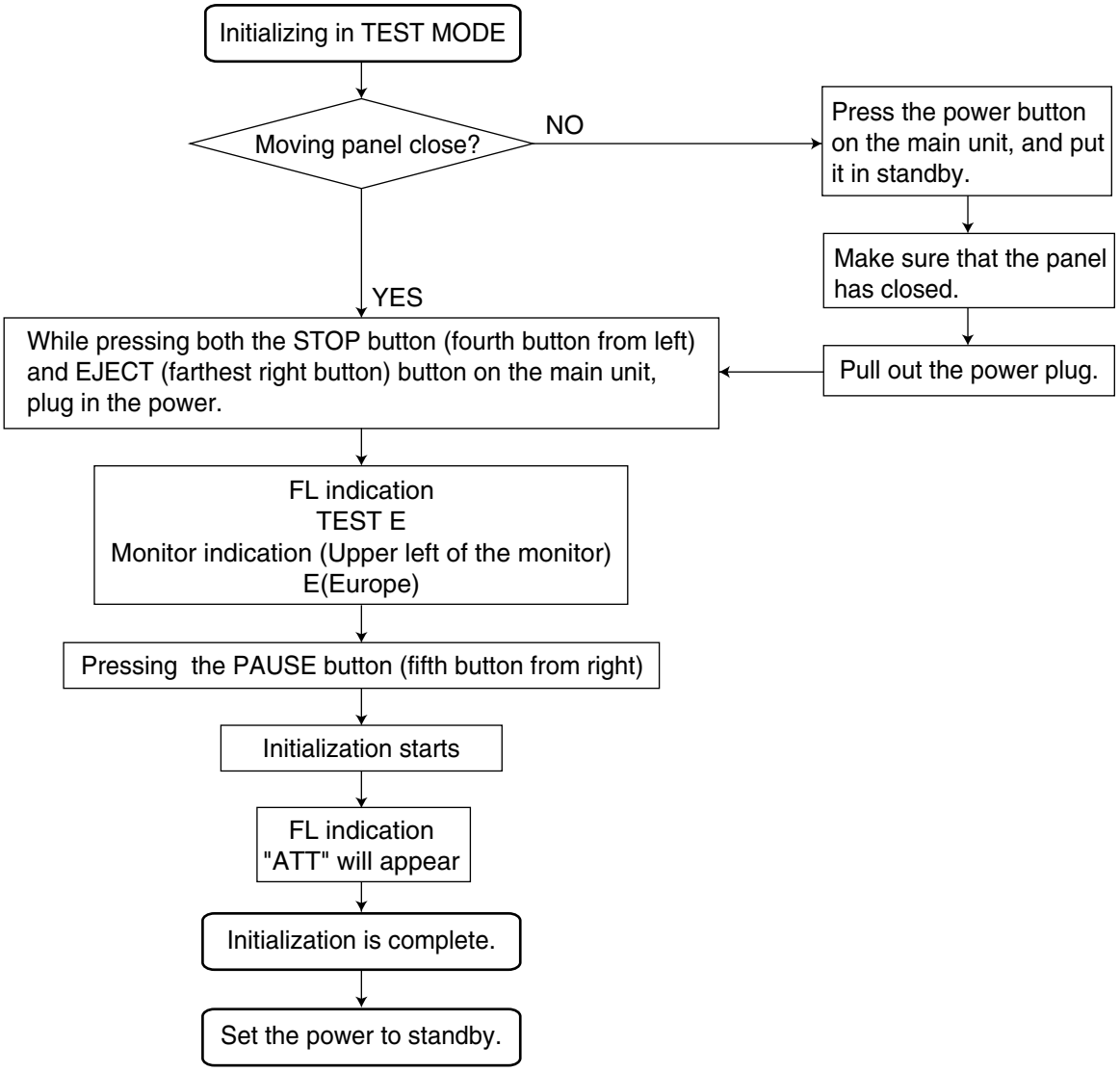


Fig.18

Adjustment method

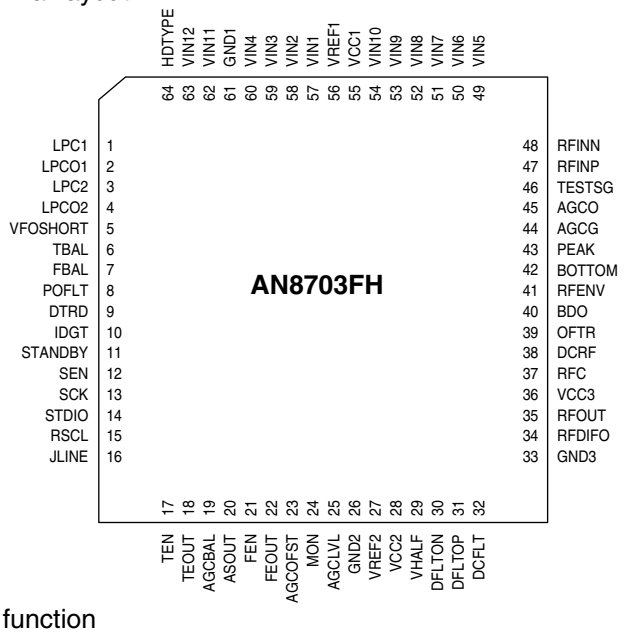
■ Initializing in TEST MODE


Initializing in TEST MODE
Moving panel close?
NO
Press the power button on the main unit, and put it in standby.
Make sure that the panel has closed.
Pull out the power plug.
YES
While pressing both the STOP button (fourth button from left) and EJECT (farthest right button) button on the main unit, plug in the power.
FL indication
TEST E
Monitor indication (Upper left of the monitor)
E(Europe)
Pressing the PAUSE button (fifth button from right)
Initialization starts
FL indication
"ATT" will appear
Initialization is complete.
Set the power to standby.

Description of major ICs

■ AN8703FH (IC101) : Frontend processor for DVD

1.Terminal layout



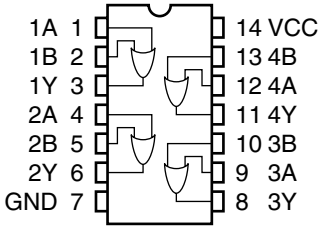
2. Pin function

Pin No.	Symbol	I/O	Function
1	LPC1	I	Laser pin input (DVD head)
2	LPCO1	O	Laser drive output (DVD head)
3	LPC2	I	Laser pin input (CD head)
4	LPCO2	O	Laser drive output (CD head)
5	VFOSHORT	I	VFOSHORT control
6	TBAL	I	Tracking balance control
7	FBAL	I	Focus balance control
8	POFLT	O	Track detection threshold level
9	DTRD	I	Data slice data read signal input (for RAM)
10	IDGT	I	Data slice address gate signal input (for RAM)
11	STANDBY	I	Standby mode control
12	SEN	I	SEN(Serial data input)
13	SCK	I	SCK(Serial data input)
14	STDIO	I/O	STDI(Serial data I/O)
15	RSCL	I	Reference current supply
16	JLINE	I	J-line current setting
17	TEN	I	Tracking error amplifier inverted input
18	TEOUT	O	Tracking error signal output
19	AGCBAL	I	Offset adjustment for DRC-1
20	ASOUT	O	Full addition signal output
21	FEN	I	Focus error amplifier inverted input
22	FEOUT	O	Focus error signal output
23	AGCOFST	I	Offset adjustment for DRC-2
24	MON	-	Not use (Monitor)
25	AGCLVL	I	Output amplitude adjustment for DRC
26	GND2	-	Ground 2
27	VREF2	O	VREF2 voltage output
28	VCC2	-	Power supply 2 (5V)
29	VHALF	O	VHALF voltage output
30	DFLTON	O	Filter amplifier inverted output

Pin No.	Symbol	I/O	Function
31	DFLTOP	O	Filter amplifier positive output
32	DCFLT	O	Filter output capacitance connection
33	GND3	-	Ground 3
34	RFDIFO	-	Radial differential output (Not use)
35	RFOUT	O	RF full-addition amplifier output
36	VCC3	-	Power supply 3 (3.3V)
37	RFC	I	Filter for RF-group delay correction amplifier
38	DCRF	O	DC-cut filter for RF full-addition amplifier
39	OFTR	O	OFTR output
40	BDO	O	BDO output
41	RFENV	O	RF envelope output
42	BOTTOM	O	Bottom envelope detection filter
43	PEAK	O	Peak envelope detection filter
44	AGCG	O	AGC amplifier gain control
45	AGCO	O	AGC amplifier level control
46	TESTSG	I	TEST signal input
47	RFINP	I	RF signal positive input
48	RFINN	I	RF signal inverted input
49	VIN5	I	Internal four-partition (CD) RF input 1
50	VIN6	I	Internal four-partition (CD) RF input 2
51	VIN7	I	Internal four-partition (CD) RF input 3
52	VIN8	I	Internal four-partition (CD) RF input 4
53	VIN9	I	External two-partition (DVD) RF input 2
54	VIN10	I	External two-partition (DVD) RF input 1
55	VCC1	-	Power supply 1 (5V)
56	VREF1	O	VREF1 voltage output
57	VIN1	I	Internal four-partition (DVD) RF input 1
58	VIN2	I	Internal four-partition (DVD) RF input 2
59	VIN3	I	Internal four-partition (DVD) RF input 3
60	VIN4	I	Internal four-partition (DVD) RF input 4
61	GND1	-	Ground 1
62	VIN11	I	3-beam sub (CD) input 2
63	VIN12	I	3-beam sub (CD) input 1
64	HDTYPE	I	HD type selection

■ MM74HCT32MTC / 74LCX32MTC (IC521 / IC522) : Quad 2 input OR gate

1. Terminal layout & Block diagram



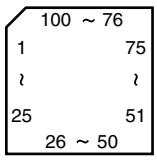
(TOP VIEW)

2. Truth table

INPUTS		OUTPUT
A	B	Y
L	L	L
L	H	H
H	L	H
H	H	H

■ MN101C49GKD1 (IC801) : System micon

1.Terminal layout



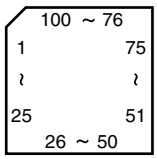
2. Pin function

Pin No.	Symbol	I/O	Function
1	VREF-	-	Connect to ground
2	NTSEL(RGB--SEL)	I	NTSC/PAL discrimination(RGB/YC switching discrimination) signal
3	VER/HOR SEL	I	Vertical/Horizontal setting discrimination signal
4	SW1	I	Slide door switch1
5	PHOTOSW	I	Loading mechanism photo switch
6	LOCK	I	Slide door lock detection(AD)
7	VERSION	I	Area discrimination signal
8	KEY1	I	Key input1 (AD)
9	KEY2	I	Key input2 (AD)
10	VREF+	-	Reference power supply
11	VDD	-	Power supply
12	OSC2	O	Oscillator output (8MHz)
13	OSC1	I	Oscillator input (8MHz)
14,17,28, 31,32	GND	-	Ground
15	XI	O	Not used (Connect to ground)
16	XO	I	Not used (Not connect)
18	DI-DO	O	PANECON serial communication data output
19	D.O.MUTE	O	MP3/JPEG mode: H (for DVD disc)
20	DI-CK	O	PANECON serial communication clock
21	RXD (DATA OUT)	O	Serial communication data output for PANTERA
22	TXD (DATA IN)	I	Serial communication data input for PANTERA
23	SCLK	I	Serial communication clock for PANTERA
24	CS	O	Transmit request for PANTERA communication
25	CPU-RESET	O	Reset signal for PANTERA
26	INTP	I	Receive request for PANTERA communication (Interruption)
27	REMOCON	I	Remote control signal input (interruption)
29	RDS ST	I	RDS communication strobe (interruption)
30	SAFETY1	I	Short detecting signal 1
33	RESET	I	Syscon reset input
34	DSP RST	O	DSP micom reset input
35	DSP RDY	O	DSP micom ready
36	AVC-OUT	O	AV compulink output
37	AVC-IN	I	AV compulink input
38	VIDEO-MUTE1	O	Video driver mute 1 control
39	VIDEO-MUTE2	O	Video driver mute 2 control
40	VIDEO-Y/C-MIX	O	Video driver YCMIX control
41	VIDEO-RGB	O	Video driver RGB control
42	DSP-COM	O	DSP serial communication data output

Pin No.	Symbol	I/O	Function
43	DSP-STAT	I	DSP serial communication data input
44	DSP-CLK	O	DSP serial communication clock
45	VOL-DATA	O	VOLUME serial communication data output
46	VOL-STB	O	VOLUME serial communication strobe
47	VOL-CLK	O	VOLUME serial communication clock
48	SW2	I	Slide door switch2
49	INT/PROG	O	D terminal LINE2 switching
50	REMO-CTL	O	Remote controller switching control
51 - 55,60 63,66	NC	-	Ground
56	MT1	O	Slide door motor control 0
57	MT1	O	Slide door motor control 1
58	MTS	O	Slide door motor speed control
59	INH	I	AC switching detection
61	HP	I	Headphone input detection
62	SYS P.ON	O	System power supply control
64	DVD P.ON	O	DVD power supply control
65	TUNER P.ON	O	TUNER power supply control
67	RDS DATA	O	RDS communication data
68	RDS CLK	O	RDS communication clock
69	-	-	Not used
70	TU-DATA-OUT	I	IF-DATA and tuner receive detection
71	-	-	Not used
72	TU-DATA-IN	O	TUNER serial communication data output
73	TU CLK	O	TUNER serial communication clock
74	TU CE	O	TUNER serial communication CE
75	AM-BEAT	O	AM beat cut switching
76	S MUTE	O	System mute
77	VS1	O	E: Scart connector control, D: S1 OUT control
78	VS3	O	Control for scart connector control terminal
79	LED-DIM	O	Disc LED dimmer control
80	LED BLUE	O	Disc LED control
81	MECHA-V/H	O	Indicate of mechanism position to front end
82	DISC-SET	O	Indicate of read start permission to front end
83	DISC-STOP	I	Receive of eject permission from front end
84	DVD-SAFETY	I	Short detecting signal 2
85	SW P.ON	O	Subwoofer power supply control
86 - 88	NC	-	Not used
89	SELECT2	O	DSP signal switching (AUX)
90	SELECT1	O	DSP signal switching (TUNER)
91	DI-RST	O	PANECON reset output
92	DI-CS	O	PANECON serial communication CS
93	-	-	Not used
94	TOPEN	O	Loading mechanism motor control 1
95	DAVSS	-	Ground
96	TCLOSE	O	Loading mechanism motor control 2
97	LMMUTE	O	Loading mechanism motor driver mute
98	SWOPEN	I	Loading mechanism eject switch
99	SWUPDN	I	Loading mechanism loading switch
100	DAVDD	-	Power supply

■ MN102L62GLF1 (IC401) : Unit CPU

1. Terminal layout



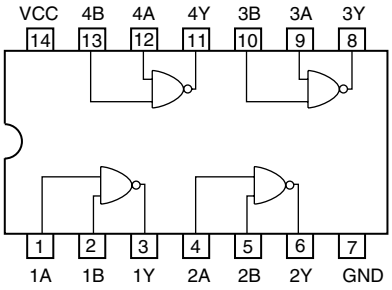
2. Pin function

Pin No.	Symbol	I/O	Function
1	WAIT	I	Micro computer wait signal input
2	RE	O	Read enable
3	/SPMUTE	O	Spindle muting output to IC251
4	WEN	O	Write enable
5	-	-	Not connect
6	CS1	O	Chip select for ODC
7	CS2	-	Chip select for ZIVA (Not connect)
8	HDTYPE	O	HD TYPE selection
9	/DRVMUTE	O	Driver mute
10	SBRK	O	SP motor brake control
11	LSIRST	O	LSI reset
12	WORD	O	Bus selection input
13 - 16	A0 - A3	O	Address bus (0 - 3) for CPU
17	VDD	-	Power supply
18	SYSCLK	-	System clock signal output (Not connect)
19	VSS	-	Ground
20	XI	-	Not use (Connect to VSS)
21	XO	-	Not connect
22	VDD	-	Power supply
23	OSCI	I	Clock signal input (13.5MHz)
24	OSCO	O	Clock signal output (13.5MHz)
25	MODE	I	CPU mode selection input
26 - 33	A4 - A11	O	Address bus (4 - 11) for CPU
34	VDD	-	Power supply
35 - 40	A12 - A17	O	Address bus (12 - 17) for CPU
41	A18	-	Address bus 18 for CPU (Not connect)
42	A19	-	Address bus 19 for CPU (Not connect)
43	VSS	-	Ground
44	A20	-	Address bus 20 for CPU (Not connect)
45	DISCSTP	O	DISC STOP control
46	HAGUP	O	H/A gain control
47	-	-	Not connect
48	-	-	Not connect
49	/HFMON	I	HF monitor
50	TRVSW	I	Detection switch of traverse inside
51	SWUPDN	-	Not connect
52	MECHA_H/V	I	Disc detection
53	DISCSET	O	Serial enable signal for ADSC
54	VDD	-	Power supply
55	FEPEN	O	Serial enable signal for FEP
56	SLEEP	O	Standby signal for FEP

Pin No.	Symbol	I/O	Function
57	-	-	Not connect
58	REQ	O	Communication request
59	-	-	Connect to TP405 (REQ)
60	-	-	Not connect
61	VSS	-	Ground
62	EPCS	O	EEPROM chip select
63	EPSK	O	EEPROM clock
64	EPDI	I	EEPROM data input
65	EPDO	O	EEPROM data output
66	VDD	-	Power supply
67	SCLKO	I	Communication clock
68	S2UTD	I	Communication input data
69	U2SDT	O	Communication output data
70	CPSCK	O	Clock for ADSC serial
71	P74/SBI1	-	Connect to VSS
72	SDOUT	O	ADSC serial data output
73	-	-	Not use (Connect to ground)
74	-	-	Not use (Connect to ground)
75	NMI	-	Not use (Connect to ground)
76	ADSCIRQ	I	Interrupt input of ADSC
77	ODCIRQ	I	Interrupt input of ODC
78	DECIRQ	I	Interrupt input of ZIVA
79	CSSIRQ	I	Interrupt input of SODC
80	ODCIRQ2	I	Interruption of system control
81	ADSEP	I	Address data selection input
82	RST	I	Reset input
83	VDD	-	Power supply
84 - 91	TEST1 - TEST 8	I	Test signal (1 - 8) input
92	VSS	-	Ground
93 - 100	D0 - 7	I/O	Data bus (0 - 7) of CPU

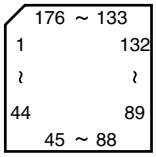
■ TC74HC00AF (IC408) : Quad 2 input NAND gate

1. Terminal layout & Block diagram



■ MN103S26EGA (IC301) : Optical disc controller

1.Terminal layout



2. Pin function

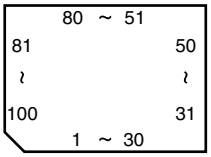
Pin No.	Symbol	I/O	Function
1	NINT0	O	System control interruption 0
2	NINT1	O	System control interruption 1
3	VDD3	-	Power supply (3.3V)
4	VSS	-	Ground
5	NINT2	O	System control interruption 2
6	WAITODC	O	System control wait control
7	NMRST	-	System control reset (Not connect)
8	DASPST	-	DASP signal initializing
9 - 17	CPUADR17 - 9	I	System control address
18	VDD18	-	Power supply (1.8V)
19	VSS	-	Ground
20	DRAMVDD18	-	Connect to VDD18
21	DRAMVSS	-	Connect to VSS
22 - 30	CPUADR8 - 0	I	System control address
31	VDD3	-	Power supply (3.3V)
32	VSS	-	Ground
33	DRAMVDD3	-	Connect to VDD3
34	NCS	I	System control chip select
35	NWR	I	System control write
36	NRD	I	System control read
37 - 44	CPUDT7 - 0	I/O	System control data
45	CLKOUT1	-	Not connect
46	MMOD	I	Connect to VSS
47	NRST	I	System reset
48	MSTPOL	I	Master terminal polarity switch input
49	SCLOCK	-	Not connect
50	SDATA	-	Not connect
51	OFTR	I	Off track signal input
52	BDO	I	RF dropout/BCA data of making to binary
53 - 56	PWM1 - 4	-	Not connect
57	VDD3	-	Power supply (3.3V)
58	DRAMVDD18	-	Connect to VDD18
59	DRAMVSS	-	Connect to VSS
60	VSS	-	Ground
61 - 64	PWM5 - 8	-	Not connect
65	TBAL	O	Tracking balance adjustment output
66	FBAL	O	Focus balance adjustment output
67	TRSDRV	O	Traverse drive output
68	SPDRV	O	Spindle drive output
69	FG	I	Motor FG input
70	TILTP	-	Not connect

Pin No.	Symbol	I/O	Function
71	TILT	-	Not connect
72	TILTN	-	Not connect
73	TX	-	Not connect
74	DTRD	-	Not connect
75	IDGT	-	Not connect
76	VDD18	-	Power supply (1.8V)
77	VSS	-	Ground
78	VDD3	-	Power supply (1.8V)
79	OSCI1	I	16.9MHz clock input
80	OSCO1	-	Not connect
81	VSS	-	Ground
82	TSTSG	O	Calibration signal
83	VFOSHORT	O	VFO short output
84	JLINE	O	J-line setting output
85	AVSS	-	Analog ground
86	ROUT	-	Not connect
87	LOUT	-	Not connect
88	AVDD	-	Analog power supply
89	VCOF	I	JFVCO control voltage
90	TRCRS	I	Input signal for track cross formation
91	CMPIN	-	Not connect
92	LPFOUT	-	Not connect
93	LPFIN	I	Pull-up to VHALF
94	AVSS	-	Analog ground
95	HPFOUT	-	Not connect
96	HPFIN	I	HPF input
97	CSLFLT	I	Pull-up to VHALF
98	RFOIF	-	Not connect
99	AVDD	-	Analog power supply
100	PLFLT2	I	Connect to capacitor 2 for PLL
101	PLFLT1	I	Connect to capacitor 1 for PLL
102	AVSS	-	Analog ground
103	RVI	I	Connect to resistor for VREF reference current source
104	VREFH	I	Reference voltage input (2.2V)
105	PLPG	-	Not connect
106	VHALF	I	Reference voltage input (1.65V)
107	DSLF2	I	Connect to capacitor 2 for DSL
108	DSLF1	I	Connect to capacitor 1 for DSL
109	AVDD	-	Analog power supply
110	NARF	I	Equivalence RF-
111	ARF	I	Equivalence RF+
112	JITOUT	O	Output for jitter signal monitor
113	AVSS	-	Analog ground
114	DAC0	O	Tracking drive output
115	DAC1	O	Focus drive output
116	AVDD	-	Analog power supply
117	AD0	I	Focus error input
118	AD1	I	Phase difference/3 beams tracking error
119	AD2	I	AS: Full adder signal

Pin No.	Symbol	I/O	Function
120	AD3	I	RF envelope input
121	AD4	I	DVD laser current control terminal
122	AD5	I	Tracking drive IC input offset
123	AD6	I	CD laser current control terminal
124	TECAPA	-	Not connect
125	VDD3	-	Power supply (3.3V)
126	VSS	-	Ground
127 - 130	MONI0 - 3	O	Internal goods title monitor (Connect to TP306 - TP309)
131	NEJECT	I	Eject detection
132	NTRYCTL	I	Tray close detection
133	NDASP	I/O	ATAPI drive active / Slave connection I/O
134	NCS3FX	I	ATAPI host chip select
135	NCS1FX	I	ATAPI host chip select
136	DA2	I/O	ATAPI host address
137	DA0	I/O	ATAPI host address
138	NPDIAG	I/O	ATAPI slave master diagnosis input
139	DA1	I/O	ATAPI host address
140	NIOCS16	-	ATAPI output of selection of host data bus width (Not connect)
141	INTRQ	O	ATAPI host interruption output
142	NDMACK	I	ATAPI host DMA response
143	VDD3	-	Power supply (3.3V)
144	VSS	-	Ground
145	IORDI	-	ATAPI host ready output (Not connect)
146	NIORD	I	ATAPI host read
147	NIOWR	I/O	ATAPI host write
148	DMARQ	-	ATAPI host DMA request (Not connect)
149 - 151	HDD15,HDD0,HDD14	I/O	ATAPI host data 15,0,14
152	VDD18	-	Power supply (1.8V)
153	PO	-	Connect to ground
154	UATASEL	I	Connect to VSS
155	VSS	-	Ground
156	VDD3	-	Power supply (3.3V)
157	HDD1,HDD13,HDD2	I/O	ATAPI data 1,13,2
160,161	HDD12,HDD3	I/O	ATAPI data 12,3
162	VDD3	-	Power supply (3.3V)
163	VSS	-	Ground
164 - 166	HDD11,HDD4,HDD10	I/O	ATAPI data 11,4,10
167,168	HDD5,HDD9	I/O	ATAPI data 5,9
169	VDD3	-	Power supply (3.3V)
170	VSS	-	Ground
171	HDD6,HDD8,HDD7	I/O	ATAPI data 6,8,7
174	VDDH	-	Reference power supply for ATAPI (5.0V)
175	NRESET	I	ATAPI host reset
176	MASTER	I/O	ATAPI master / Slave selection

■ TC9446F-025 (IC403) : DSP

1.Terminal layout



2. Pin function

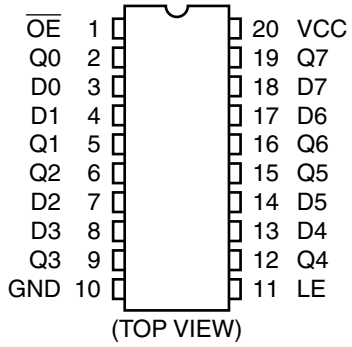
Pin No.	Symbol	I/O	Function
1	$\overline{\text{RST}}$	I	Reset signal input terminal (L: reset, H: normal operation)
2	MIMD	I	Mode select input for MCU interface (L: serial, H: IIC bus)
3	$\overline{\text{MICS}}$	I	Chip select input for MCU interface
4	$\overline{\text{MILP}}$	I	Latch pulse input for MCU interface
5	MIDIO	I/O	Data input and output for MCU interface
6	$\overline{\text{MICK}}$	I	Clock input for MCU interface
7	MIACK	O	Acknowledge output for MCU interface
8	F10	I	Flag input 0
9	F11	I	Flag input 1
10	F12	I	Flag input 2
11	F13	I	Flag input 3
12	IRQ	I	Interruption input
13	VSS	-	Digital ground
14	LRCKA	I	LR clock input-A for audio interface
15	BCKA	I	Bit clock input-A for audio interface
16	SDO0	O	Data output-0 for audio interface
17	SDO1	O	Data output-1 for audio interface
18	SDO2	O	Data output-2 for audio interface
19	SDO3	O	Data output-3 for audio interface (Not connect)
20	LRCKB	I	LR clock input-B for audio interface
21	BCKB	I	Bit clock input-B for audio interface
22	SDI0	I	Data input-0 for audio interface
23	SDI1	I	Data input-1 for audio interface
24	VDD	-	Digital power supply
25	LRCKOA	O	LR clock output-A for audio interface
26	BCKOA	O	Bit clock output-A for audio interface
27	$\overline{\text{TEST0}}$	I	Test input-0 (L: test, H: normal operation)
28	$\overline{\text{TEST1}}$	I	Test input-1 (L: test, H: normal operation)
29	LRCKOB	O	LR clock output-B for audio interface (Not connect)
30	BCKOB	O	Bit clock output-B for audio interface (Not connect)
31	TXO	O	SPDIF output
32	$\overline{\text{TEST2}}$	I	Test input-2 (L: test, H: normal operation)
33	$\overline{\text{TEST2}}$	I	Test input-3 (L: test, H: normal operation)
34	RX	I	SPDIF input
35	VSS	-	Digital ground
36	$\overline{\text{TSTSUB0}}$	I	Test sub input-0 (L: test, H: normal operation)
37	FCONT	O	Frequency control output for VCO circuit
38	$\overline{\text{TSTSUB1}}$	I	Test sub input-1 (L: test, H: normal operation)
39	$\overline{\text{TSTSUB2}}$	I	Test sub input-2 (L: test, H: normal operation)
40	PDO	O	Phase detect signal output
41	VDDA	-	Analog power supply

Pin No.	Symbol	I/O	Function
42	PLON	I	Clock selection input (L: external clock, H: VCO clock)
43	AMPI	I	Amplifier input for low pass filter
44	AMPO	O	Amplifier output for low pass filter
45	CKI	I	External clock input
46	VSSA	-	Analog ground
47	CKO	O	DIR clock output
48	LOCK	O	VCO lock output
49	VSS	-	Digital ground
50	$\overline{WR}$	O	Write signal output for external SRAM
51	$\overline{OE}$	O	Enable signal output for external SRAM
52	$\overline{CE}$	O	Chip enable signal output for external SRAM
53	VDD	-	Digital power supply
54	IO7	I/O	Data I/O-7 for external SRAM
55	IO6	I/O	Data I/O-6 for external SRAM
56	IO5	I/O	Data I/O-5 for external SRAM
57	IO4	I/O	Data I/O-4 for external SRAM
58	IO3	I/O	Data I/O-3 for external SRAM
59	IO2	I/O	Data I/O-2 for external SRAM
60	IO1	I/O	Data I/O-1 for external SRAM
61	IO0	I/O	Data I/O-0 for external SRAM
62	VSS	-	Digital ground
63	AD0	O	Address output-0 for external SRAM
64	AD1	O	Address output-1 for external SRAM
65	AD2	O	Address output-2 for external SRAM
66	AD3	O	Address output-3 for external SRAM
67	AD4	O	Address output-4 for external SRAM
68	AD5	O	Address output-5 for external SRAM
69	AD6	O	Address output-6 for external SRAM
70	AD7	O	Address output-7 for external SRAM
71	VDD	-	Digital power supply
72	AD8	O	Address output-8 for external SRAM
73	AD9	O	Address output-9 for external SRAM
74	AD10	O	Address output-10 for external SRAM
75	AD11	O	Address output-11 for external SRAM
76	AD12	O	Address output-12 for external SRAM
77	AD13	O	Address output-13 for external SRAM
78	AD14	O	Address output-14 for external SRAM
79	AD15	O	Address output-15 for external SRAM
80	AD16	O	Address output-16 for external SRAM
81	VSS	-	Digital ground
82	PO0	O	General output port-0
83	PO1	O	General output port-1
84	PO2	O	General output port-2
85	PO3	O	General output port-3
86	PO4	O	General output port-4
87	PO5	O	General output port-5
88	PO6	O	General output port-6
89	PO7	O	General output port-7
90	VDDDL	-	Power supply for DLL circuit

Pin No.	Symbol	I/O	Function
91	LPFO	O	Low pass filter output for DLL circuit
92	DLON	I	DLCKS pin / DLON pin / DLL clock setting "L" / "L" / SCKI input (DLL = off) "L" / "H" / 4th times of XI clock "H" / "L" / 3rd times of XI clock "H" / "H" / 6th times of XI clock
93	DLCKS	I	
94	SCKO	O	ASP clock output (Not connect)
95	VSSDL	-	Ground for DLL circuit
96	SCKI	I	External system clock input
97	VSSX	-	Ground for crystal oscillator
98	XO	O	Crystal oscillator output
99	XI	I	Crystal oscillator input
100	VDDX	-	Digital power supply

■ 74LCX373MTC (IC512,IC513) : Octal D-type latch

1. Terminal layout



(TOP VIEW)

2. Truth table

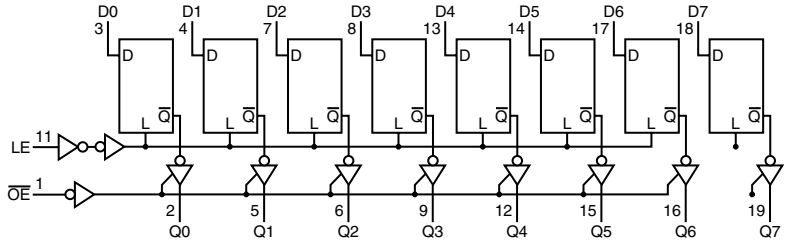
INPUTS			OUTPUT
$\overline{OE}$	LE	D	Y
H	X	X	Z
L	L	X	Qn
L	H	L	L
L	H	H	H

X: Don't care

Z: High impedance

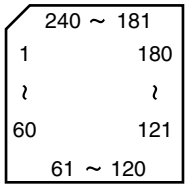
Qn: Q outputs are latched at the time when the LE input is taken to a low logic level.

3. Block diagram



■ NDV8601VWA-BB (IC501) : DVD on a chip processor

1.Terminal layout



2. Pin function

Pin No.	Symbol	I/O	Function
1	Vddio	-	Power supply (3.3V)
2,3	MD10,MD11	I/O	SDRAM data bus
4	Vdd	-	Power supply (1.8V)
5	MD12	I/O	SDRAM data bus
6	Vssio	-	Ground
7 - 9	MD13 - MD15	I/O	SDRAM data bus
10	Vddio	-	Power supply (3.3V)
11	DQM1	O	SDRAM data byte enable
12,13	MA9,MA8	O	SDRAM address bus
14	Vssio	-	Ground
15,16	MA7,MA6	O	SDRAM address bus
17	Vss	-	Ground
18	MA5	O	SDRAM address bus
19	Vddio	-	Power supply (3.3V)
20,21	MA4,MA3	O	SDRAM address bus
22	MCLK	O	SDRAM clock
23	Vssio	-	Ground
24	CKE	O	SDRAM clock enable
25,26	MA2,MA1	O	SDRAM address bus
27	Vddio	-	Power supply (3.3V)
28,29	MA0,MA10	O	SDRAM address bus
30	MA11	-	Not connect (SDRAM address bus)
31	Vssio	-	Ground
32,33	MA12,MA13	O	SDRAM address bus, reserved for pin compatibility with 63-Mb SDRAM
34	Vdd	-	Power supply (1.8V)
35	CS0-	O	SDRAM primary bank chip select
36	Vddio	-	Power supply (3.3V)
37	RAS-	O	SDRAM command bit
38	CAS-	O	SDRAM command bit
39	WE-	O	SDRAM command bit
40	Vssio	-	Ground
41	DQM0	O	SDRAM data byte enable
42	DQM2	O	SDRAM data byte enable
43	MD16	I/O	SDRAM data bus
44	Vddio	-	Power supply (3.3V)
45,46	MD17,MD18	I/O	SDRAM data bus
47	Vss	-	Ground
48	MD19	I/O	SDRAM data bus
49	Vssio	-	Ground
50 - 52	MD20 - MD22	I/O	SDRAM data bus
53	Vddio	-	Power supply (3.3V)

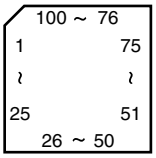
Pin No.	Symbol	I/O	Function
54 - 56	MD23 - MD25	I/O	SDRAM data bus
57	Vssio	-	Ground
58 - 61	MD26 - MD29	I/O	SDRAM data bus
62	Vddio	-	Power supply (3.3V)
63,64	MD30,MD31	I/O	SDRAM data bus
65	DQM3	O	SDRAM data byte enable
66	CS1-	-	Not connect (SDRAM extension bank chip select)
67	Vsso	-	Ground
68	SPDIF	O	S/PDIF digital audio output
69	Vssio	-	Ground
70	AIN	I	Digital audio input for digital micro; can be used as GPIO
71	AOUT3	O	Serial audio output data to audio DAC for left and right channels for down-mixed stereo; can be used as GPIO
72	AOUT2	O	Serial audio output data to audio DAC for surround left and right channels; can be used as GPIO
73	AOUT1	O	Serial audio output data to audio DAC for center and LFE channels; can be used as GPIO
74	AOUT0	O	Serial audio output data to audio DAC for left and right channels; can be used as GPIO
75	Vddio	-	Power supply (3.3V)
76	PCMCLK	-	Not connect (Audio DAC PCM sampling clock frequency, common clock for DACs and ADC; can be used as GPIO)
77	Vdd	-	Power supply (1.8V)
78	ACLK	O	Audio interface serial data clock, common clock for DACs and analog-to digital converter (ADC)
79	LRCLK	O	Left/Right channel clock, common clock for DACs and ADC
80	SRST	O	Active low RESET signal for peripheral reset
81	RSTP	I	RESET_Power from system, used to reset frequency synthesizer and rest of chip
82	Vssio	-	Ground
83	RXD1	I	UART1 serial data input from external serial device, used for IR receive; can be used as GPIO
84	SSPIN1	I/O	SSP1 data in or 16X clock for USART function in UART1; can be used as GPIO
85	Vss	-	Ground
86	SSPOUT1	I/O	SSP1 data out or UART1 data-terminal-ready signal; can be used as GPIO
87	SSPCLK1	I/O	SSP1 clock or UART1 clear-to-send signal; can be used as GPIO
88	SSPCLK0	I/O	SSP0 clock or request-to-send function in UART1; can be used as GPIO
89	Vdd	-	Power supply (1.8V)
90	SSPIN0	I/O	SSP0 data in or 16X clock for USART function in UART0; can be used as GPIO
91	Vddio	-	Power supply (3.3V)
92	SSPOUT0	I/O	SSP0 data out or UART0 data-terminal-ready signal; can be used as GPIO
93	TXD0	I/O	UART0 serial data output to an external serial device; can be used as GPIO
94	RXD0	I	UART0 serial data input from external serial device; can be used as GPIO
95	CTS0-	I/O	UART0 clear-to-send signal; can be used as GPIO
96	RTS0-	I/O	UART0 request-to-send signal; can be used as GPIO
97	Vssio	-	Ground
98	CXI	I	Crystal input pin for on-chip oscillator or system input clock
99	CXO	-	Not connect (Crystal output pin for on-chip oscillator)

Pin No.	Symbol	I/O	Function
100	OSCVss	-	Oscillator ground
101	OSCVdd	-	Oscillator power supply (1.8V)
102	MVCKVdd	-	Main and video clock PLL power supply (3.3V)
103	SCEN	I	Scan chain test enable
104	MVCKVss	-	Main and video clock PLL ground
105	ACLKVss	-	Audio clock PLL ground
106	SCMD	I	Scan chain test mode
107	ACLKVdd	-	Audio clock PLL power supply (3.3V)
108	Vdddak	-	DAC digital power supply (1.8V)
109	Vssdac	-	DAC digital ground
110	Cr/R	O	Video DAC3 output (A second composite video; Cr output for composite, Cr output for component, Red output for SCART
111	IOM	O	Cascaded DAC differential output used to dump current into external resistor for power
112	C/Cb/B	O	Video DAC2 output (Chrominance output for NTSC/PAL S-Video; Cb output for component, Blue output for SCART
113	Vaa3	-	DAC analog power supply (3.3V)
114	Y/G	O	Video DAC1 output (Luminance for S-Video and component, G output for SCART)
115	Vssa	-	DAC analog ground
116	VREF	-	Not connect (Input voltage reference (1.2V typical) for output DACs)
117	Vaa	-	Connect to power supply (1.8V)
118	CVBS/C	O	Video DAC output (Composite video; Chrominance output for S-Video)
119	RSET	O	Current setting resistor of output DACs
120	COMP	O	Compensation capacitor connection
121	Vss	-	Ground
122	VCLK	-	Not connect (VCLK input/output for video I/O port function
123	VSYNC	-	Not connect (Bi-directional HSYNC signal for devices that do not use end active video/start active video (EAV/SAV) codes; can be used as GPIO)
124	HSYNC	-	Not connect (Bi-directional VSYNC signal for devices that do not use end active video/start active video (EAV/SAV) codes; can be used as GPIO)
125	Vddio	-	Power supply (3.3V)
126 - 131	VIO7 - VIO2	-	Not connect (Bi-directional digital video port data bus; can be used as GPIO)
132	Vssio	-	Ground
133,134	VIO1,VIO0	-	Not connect (Bi-directional digital video port data bus; can be used as GPIO)
135	Vdd	-	Power supply (1.8V)
136 - 139	AD31 - AD28	I/O	μP multiplexed address/data bus
140	Vddio	-	Power supply (3.3V)
141 - 144	AD27 - AD24	I/O	μP multiplexed address/data bus
145	PWE3-	I/O	Byte write enable for FLASH, EEPROM, SRAM or peripherals
146	AD23	I/O	μP multiplexed address/data bus
147	Vssio	-	Ground
148 - 153	AD22 - AD17	I/O	μP multiplexed address/data bus
154	Vddio	-	Power supply (3.3V)
155	AD16	I/O	μP multiplexed address/data bus
156	PWE2-	I/O	Byte write enable for FLASH, EEPROM,SRAM or peripherals
157,158	AD15,AD14	I/O	μP multiplexed address/data bus
159	Vdd	-	Power supply (1.8V)
160	SCLK	O	External bus clock used for programmable host bus peripherals
161	ACK	I/O	Programmable WAIT-/ACK-/RDY- control

Pin No.	Symbol	I/O	Function
162	Vssio	-	Ground
163 - 168	AD13 - AD8	I/O	μP multiplexed address/data bus
169	Vddio	-	Power supply (3.3V)
170	PWE1-	I/O	Byte write enable for FLASH, EEPROM,SRAM or peripherals
171	Vss	-	Ground
172 - 176	AD7 - AD3	I/O	μP multiplexed address/data bus
177	Vssio	-	Ground
178 - 180	AD2 - AD0	I/O	μP multiplexed address/data bus
181	Vddio	-	Power supply (3.3V)
182	PWE0-	I/O	Byte write enable for FLASH, EEPROM,SRAM or peripherals
183	ALE	I/O	Address latch enable
184 - 187	LA0 - LA3	I/O	Latched address [3:0]
188	Vssio	-	Ground
189	RD-	I/O	Read
190	LHLDA	O	Bus hold acknowledge in slave mode
191	LHLD	I	Bus hold request from external master in slave mode
192	Vdd	-	Power supply (1.8V)
193	PCS0	O	Peripheral chip select 0, generally used for enabling the program store ROM/FLASH
194,195 197 - 200 202,203 205 - 209 211	XIO1,XIO2 XIO3 - XIO6 XIO7,XIO8 XIO9 - XIO13 XIO14	I/O	Programmable general purpose external input/output (XIO) also used as peripheral chip select, interrupt, Pulse Width Modulator (PWM) output and other system signals
196	Vddio	-	Power supply (3.3V)
201	Vss	-	Ground
204	Vssio	-	Ground
210	Vddio	-	Power supply (3.3V)
212	Vdd	-	Power supply (1.8V)
213	DSYNC	I	DVD parallel mode Sector Sync
214	DREQ	O	DVD parallel mode Data Request
215	DCLK	I	Data sampling clock
216	DSTB	I	Parallel mode Data Valid, serial mode left/right clock
217	DVD0	I	DVD drive parallel data port
218	Vssio	-	Ground
219 - 223	DVD1 - DVD5	I	DVD drive parallel data port
224	Vddio	-	Power supply (3.3V)
225,226	DVD6,DVD7	I	DVD drive parallel data port
227	MD0	I/O	SDRAM data bus
228	Vssio	-	Ground
229	MD1	I/O	SDRAM data bus
230	Vss	-	Ground
231,232	MD2,MD3	I/O	SDRAM data bus
233	Vddio	-	Power supply (3.3V)
234 - 236	MD4 - MD6	I/O	SDRAM data bus
237	Vssio	-	Ground
238 - 240	MD7 - MD9	I/O	SDRAM data bus

■ UPD784215AGC167 (IC406) : DSP micom

1. Terminal layout



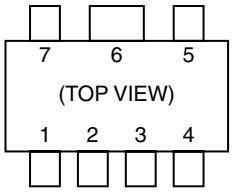
2. Pin function

Pin No.	Symbol	I/O	Function
1 - 8	-	-	Not connect
9	VDD	-	Power supply
10	X2	O	OSC connect pin
11	X1	I	OSC connect pin
12	VSS	-	Ground
13	XT2	-	Not connect
14	XT1	-	Not connect
15	$\overline{\text{RESET}}$	I	Reset input
16	$\overline{\text{AUTODATA}}$	O	Data request signal
17	LOCK	I	VCO lock input
18	DIGITAL0	I	Digital data input
19	DSP FORMAT	I	DSP format status signal
20	DSP CHANNEL	I	DSP channel status signal
21	PARITY_ERR	I	Data error output signal
22	$\overline{\text{RESET IN}}$	I	Reset signal input
23	AVDD	-	Analog power supply
24	AV REF0	-	Connect to ground
25	-	-	Connect to ground
26	FILTER SELECT	I	Filter selection
27 - 32	-	-	Connect to ground
33	AVSS	-	Ground
34,35	-	-	Not connect
36	-	-	Connect to VDD
37	Rx	I	Digital signal input
38	Tx	O	Digital signal output
39	-	-	Not connect
40	I	O	DSP control signal
41	$\overline{\text{O}}$	O	DSP status signal
42	$\overline{\text{DSP\_CLK}}$	O	DSP clock control
43	DSP_RDY	O	DSP ready signal
44	-	-	Not connect
45	MIDIO_IN	I	Data input for MCU interface
46	MIDIO_OUT	O	Data output for MCU interface
47	$\overline{\text{MICK}}$	O	Clock output for MCU interface
48	$\overline{\text{MICS}}$	O	Chip select output for MCU interface
49	$\overline{\text{MILP}}$	O	Latch pulse output for MCU interface
50	$\overline{\text{MIACK}}$	I	Acknowledge input for MCU interface
51,52	-	-	Not connect
53	$\overline{\text{DSP\_RST}}$	O	DSP reset signal
54 - 63	-	-	Not connect

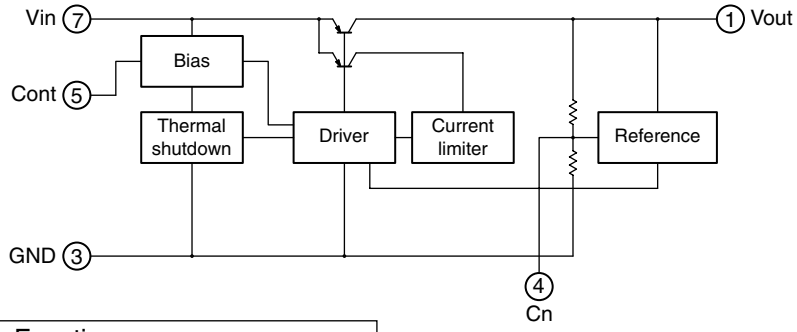
Pin No.	Symbol	I/O	Function
64	CODEC_D-OUT	O	CO decoder digital data output
65	CODEC_D-IN	I	CO decoder digital data input (Not connect)
66	$\overline{\text{CODEC\_CLK}}$	O	CO decoder clock signal
67	$\overline{\text{CODEC\_CS}}$	O	CO decoder chip select signal
68	CODEC_XTS	-	Not connect
69,70	-	-	Not connect
71	$\overline{\text{PD}}$	O	Power down and Reset in
72	GND	-	Ground
73 - 80	-	-	Not connect
81	VDD	-	Power supply
82	$\overline{\text{3D-ON}}$	-	Not connect
83	3D-ON	-	Not connect
84	ANA/T.TONE	O	Analog test tone output
85	LFE.MIX	-	Not connect
86	-	-	Not connect
87	D-OUT_MUTE	O	Digital out mute output
88	$\overline{\text{S.MUTE}}$	O	System mute output
89	-	-	Not connect
90	ASW1	O	Optical/Coaxial switching
91	ASW2	O	Optical/Coaxial switching
92	ASW3	-	Not connect
93	ASW4	-	Not connect
94	TEST	I	Test pin
95 - 100	-	-	Not connect

■ MM1563DF (IC407) : Regulator

1. Terminal layout



2. Block diagram

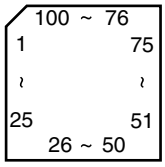


3. Pin function

Pin No.	Symbol	Function
1	Vout	Output pin
2	NC	Not connect
3	GND	Ground
4	Cn	Noise decrease pin
5	Cont	Control pin CONT: H → Output: ON CONT: L → Output: OFF
6	Sub	Substrate pin, The 6pin must be connected to GND.
7	Vin	Input pin

■ MN101C35DKB (IC701) : FL driver microcomputer

1. Terminal layout

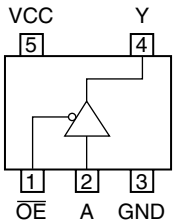


2. Pin function

Pin No.	Symbol	I/O	Function
1	NC	-	Not connect
2	DATAIN	I	FL driver communication data input/output
3	CLOCK	I	FL driver communication clock input
4	NC	-	Not connect
5	INITIAL	I	FL driver communication CS(INITIAL)
6,7	NC	-	Not connect
8	B5V	-	VDD(B5V)
9	OSC2	O	8MHz main clock output
10	OSC1	I	8MHz main clock input
11,12	GND	-	Ground
13	NC	-	Not connect
14 - 23	GND	-	Ground
24	VREF+	-	Reference voltage
25	NC	-	Not connect
26	RESET	I	FL reset input
27	PLED-HO	O	POWER LED switching signal
28	KEYLED-HO	O	KEY LED switching signal
29	PLED.VE	O	POWER LED switching signal
30	KEYLED_VE	O	KEY LED switching signal
31	REMOCON_HO	O	Remote control receiver switching signal
32	NC	-	Not connect
33 - 38	GND	-	Ground
39	PLED_DIM	O	POWER LED DIMMER switching signal
40	LED_DIM	O	KEY LED DIMMER switching signal
41 - 46	NC	-	Not connect
47	G1	O	Grid signal outputs
48 - 59	G2 - G13	O	Grid signal outputs
60	G14	O	Grid signal outputs
61	Q15	-	Not connect
62 - 64	-	-	Not connect
65 - 99	S1 - S35	O	Segment signal outputs
100	-VPP	-	VPP

■ NC7SZ125P5 (IC523) : Bus buffer gate with 3-state output

1. Terminal layout & Block diagram



2. Truth table

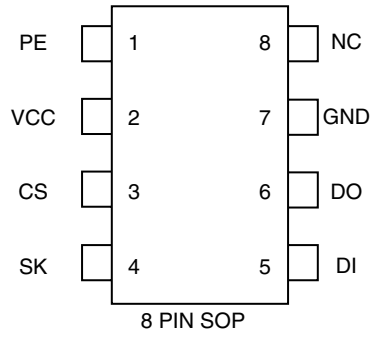
INPUTS		OUTPUT
$\overline{OE}$	B	Y
L	H	H
L	L	L
H	X	Z

X: Don't care

Z: High impedance

■ AK93C65AF (IC510) : EEPROM

1. Terminal layout

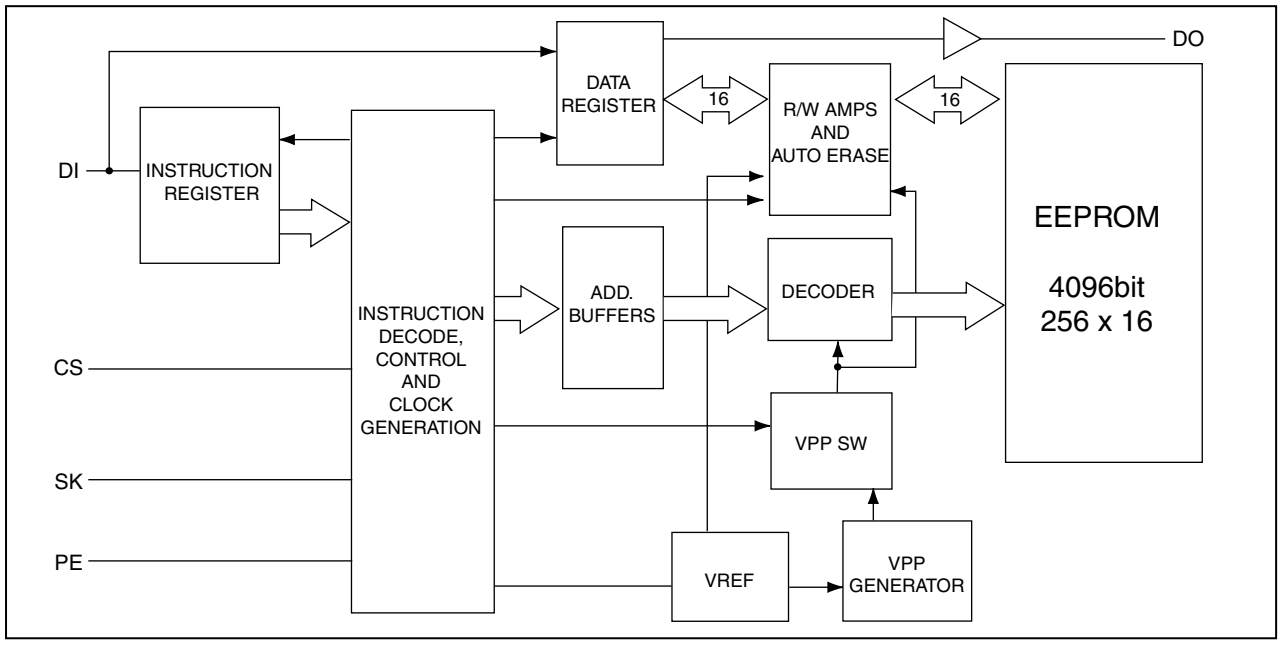


2. Pin function

Pin No.	Symbol	Function
1	PE	Not connect, Program enable (With built-in pull-up resistor)
2	VCC	Power supply
3	CS	Chip selection
4	SK	Cereal clock input
5	DI	Cereal data input
6	DO	Cereal data output
7	GND	Ground
8	NC	Not connect

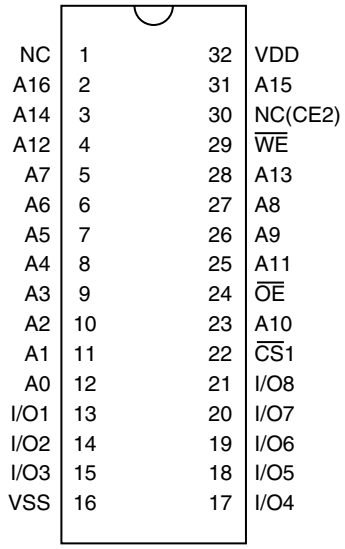
NOTE : The pull-up resistor of the PE pin is about 2.5MΩ (VCC=5V)

3. Block diagram



■ W24L010AJ-12/LP61L1024S-12-X (IC404) : SDRAM

1. Terminal layout

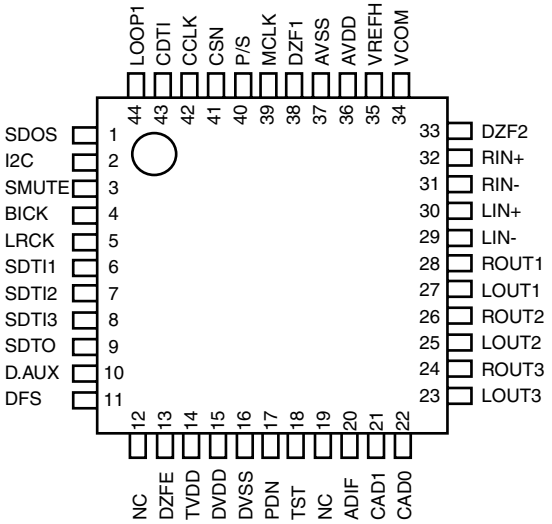


2. Pin function

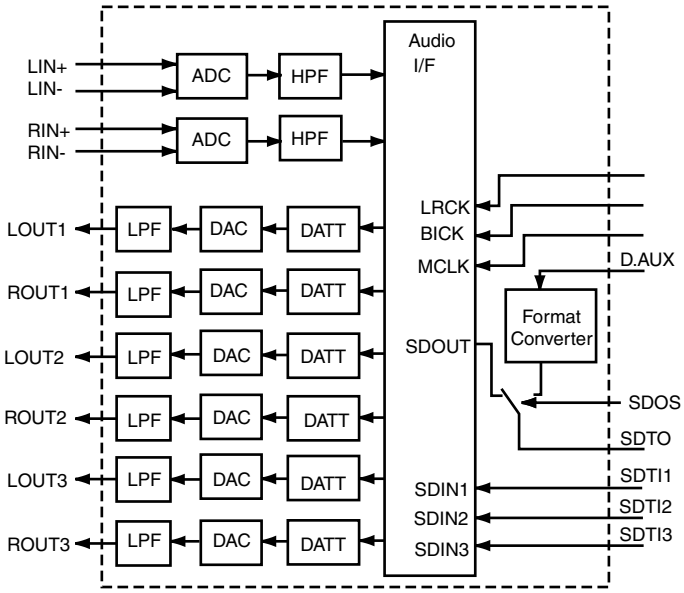
Symbol	Function
A0~A16	Address inputs
I/O1~I/O8	Data inputs/outputs
$\overline{CS}$1	Chip select inputs
$\overline{WE}$	Write enable input
$\overline{OE}$	Output enable input
VDD	Power supply
VSS	Ground

■ AK4527BVQP (IC401) : A/D,D/A Converter

1.Terminal layout



2.Block diagram



Block Diagram (DIR and AC-3) DSP are external parts)

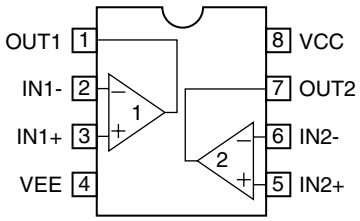
3. Pin function

Pin No.	Symbol	I/O	Function
1	SDOS	I	SDTO Source select pin "L" : Internal ADC output, "H" : DAUX input ORed with serial control register if P/S="L".
2	I2C	I	MCKO Clock frequency select pin "L" : MCLK, "H" : MCLK/2. ORed with serial control register if P/S= "L".
3	SMUTE	I	Connect to GND
4	BICK	I	Audio serial data clock pin
5	LRCK	I/O	Input/Output channel clock pin
6	SDTI1	I	DAC1 Audio serial data input pin
7	SDTI2	I	DAC2 Audio serial data input pin
8	SDTI3	I	DAC3 Audio serial data input pin
9	SDTO	O	Audio serial data output pin
10	D.AUX	I	AUX Audio serial data input pin
11	DFS	I	Double speed sampling mode pin "L" : Normal speed, "H" : Double speed, the ADC is powered down. ORed with serial control register if P/S="L".
12	NC	-	De-emphasis pin (Not connect) ORed with serial control register if P/S="L"
13	DZFE	I	De-emphasis Pin ORed with serial control register if P/S="L"
14	TVDD	O	Master clock output pin
15	DVDD	-	Digital power supply pin
16	DVSS	-	Digital ground pin
17	PDN	I	Power-down & Reset pin When "L", the AK4527 is powered-down and the control registers are reset to default state. If the state of CAD0-1 changes, then the AK4527 must be reset by PDN.

Pin No.	Symbol	I/O	Function
18	TST	I	X'tal oscillator Select/Test mode pin "H" : X'tal Oscillator selected "L" : External clock source selected
19	NC	I	Input clock select 1 pin (Not connect)
20	ADIF	I	Input clock select 0 pin
21	CAD1	I	Chip address pin Used during the serial control mode.
22	CAD0	I	Chip address pin Used during the serial control mode.
23	LOUT3	O	Lch #3 analog output pin
24	ROUT3	O	Rch #3 analog output pin
25	LOUT2	O	Lch #2 analog output pin
26	ROUT2	O	Rch #2 analog output pin
27	LOUT1	O	Lch #2 analog output pin
28	ROUT1	O	Rch #1 analog output pin
29	LIN-	I	Lch analog negative Input Pin
30	LIN+	I	Lch analog positive Input Pin
31	RIN-	I	Rch analog negative Input Pin
32	RIN+	I	Rch analog positive Input Pin
33	DZF2	I	Negative voltage reference Input pin, AVSS
34	VCOM	O	Common voltage output pin,AVDD/2 Large external capacitor around 2.2uF is used to reduce power-supply noise
35	VREFH	I	Positive voltage reference input pin,AVDD
36	AVDD	-	Analog power supply pin
37	AVSS	-	Analog ground pin
38	DZF1	I	X'tal input pin (Not connect)
39	MCKI	I	External master clock input pin if XTS="L"
40	P/S	I	Parallel/Serial select pin "L" : Serial control mode, "H" : Parallel control mode
41	CSN	I	Chip select pin in serial mode
42	CCLK	I	Control data clock pin in serial mode
43	CDTI	I	Control data input pin in serial mode
44	LOOP1	I	Loop back mode pin in parallel mode Enable all 3 DAC channels to be input from SDTII.

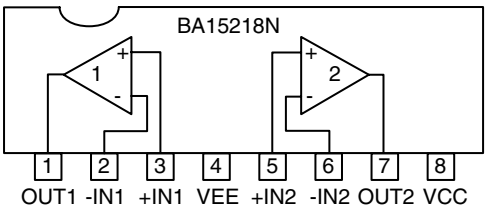
■ BA15218F (IC510,IC511,IC531,IC561,IC581,IC591) : Dual operational amplifier

1. Terminal layout & Block diagram



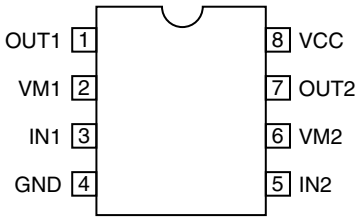
■ BA15218N (IC103,IC104,IC108,IC109,IC110,IC201,IC202) : Dual operational amplifier

1. Terminal layout & Block diagram

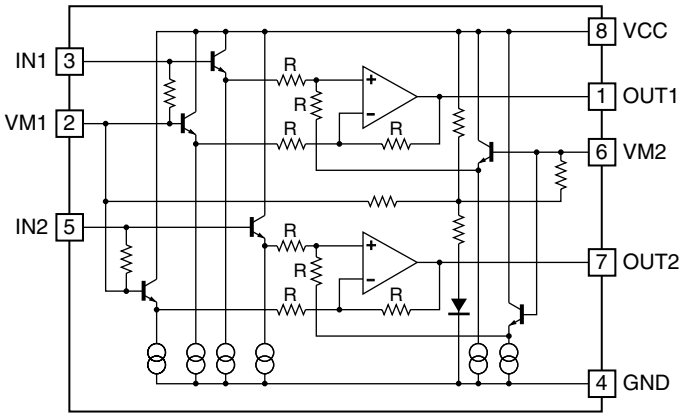


■ BA3121 (IC100,IC101,IC102) : Ground isolation amplifier

1. Terminal layout

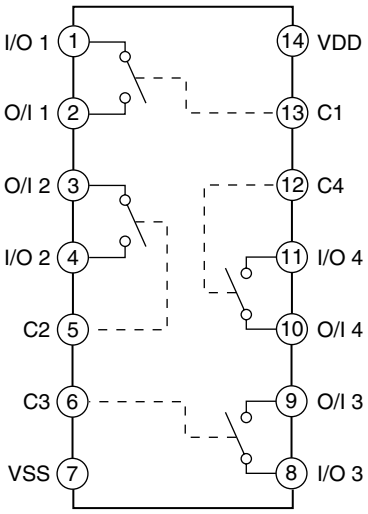


2. Block diagram



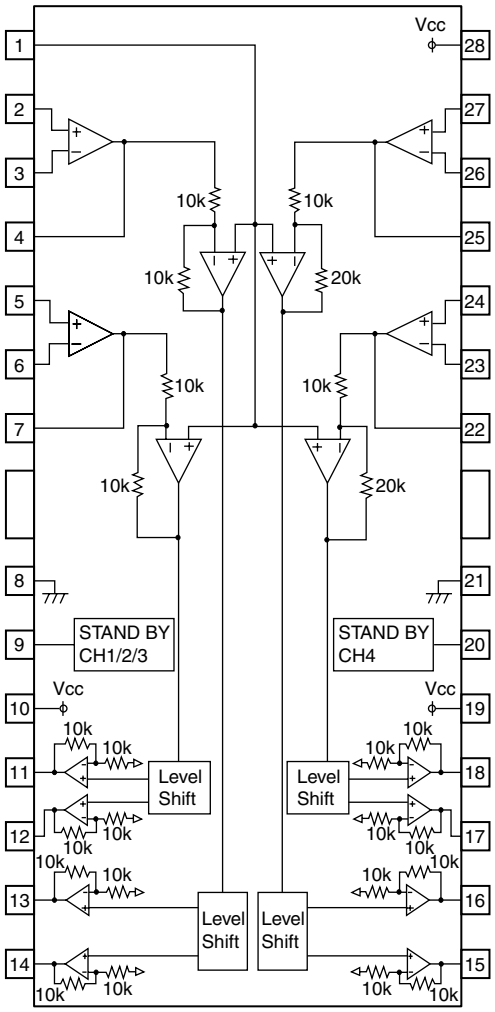
■ BU4066BCF (IC151) : Quad analog witch

1. Terminal layout & Block diagram



■ BA5983FM (IC201) : 4-channel driver

1. Terminal layout & Block diagram

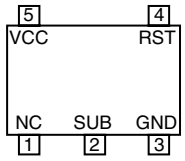


2. Pin function

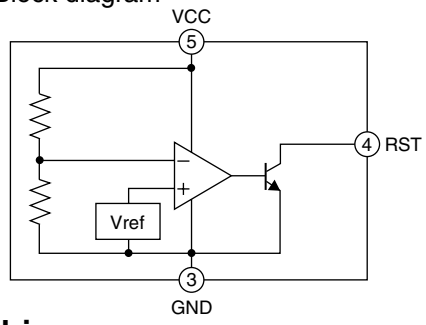
Pin No.	Symbol	I/O	Function
1	BIASIN	I	Input for Bias-amplifier
2	OPIN1+	I	Non inverting input for CH1 OP-AMP
3	OPIN1-	I	Inverting input for CH1 OP-AMP
4	OPOUT1	O	Output for CH1 OP-AMP
5	OPIN2+	I	Non inverting input for CH2 OP-AMP
6	OPIN2-	I	Inverting input for CH2 OP-AMP
7	OPOUT2	O	Output for CH2 OP-AMP
8	GND	-	Substrate ground
9	STBY1	I	Input for CH1/2/3 stand by control
10	POWVCC1	-	Vcc for CH1/2 power block
11	VO2-	O	Inverted output of CH2
12	VO2+	O	Non inverted outpur of CH2
13	VO1-	O	Inverted output of CH1
14	VO1+	O	Non inverted outpur of CH1
15	VO4+	O	Non inverted output of CH4
16	VO4-	O	Inverted output of CH4
17	VO3+	O	Non inverted output of CH3
18	VO3-	O	Inverted output of CH3
19	POWVCC2	-	Vcc for CH3/4 power block
20	STBY2	I	Input for Ch4 stand by control
21	GND	-	Substrate ground
22	OPOUT3	O	Output for CH3 OP-AMP
23	OPIN3-	I	Inverting input for CH3 OP-AMP
24	OPIN3+	I	Non inverting input for CH3 OP-AMP
25	OPOUT4	O	Output for CH4 OP-AMP
26	OPIN4-	I	Inverting input for CH4 OP-AMP
27	OPIN4+	I	Non inverting input for CH4 OP-AMP
28	PREVCC	-	Vcc for pre block

■ BD4740G (IC803) : Reset

1. Terminal layout

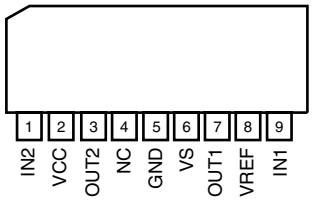


2. Block diagram



■ TA8409S (IC108) : Motor driver

1. Terminal layout

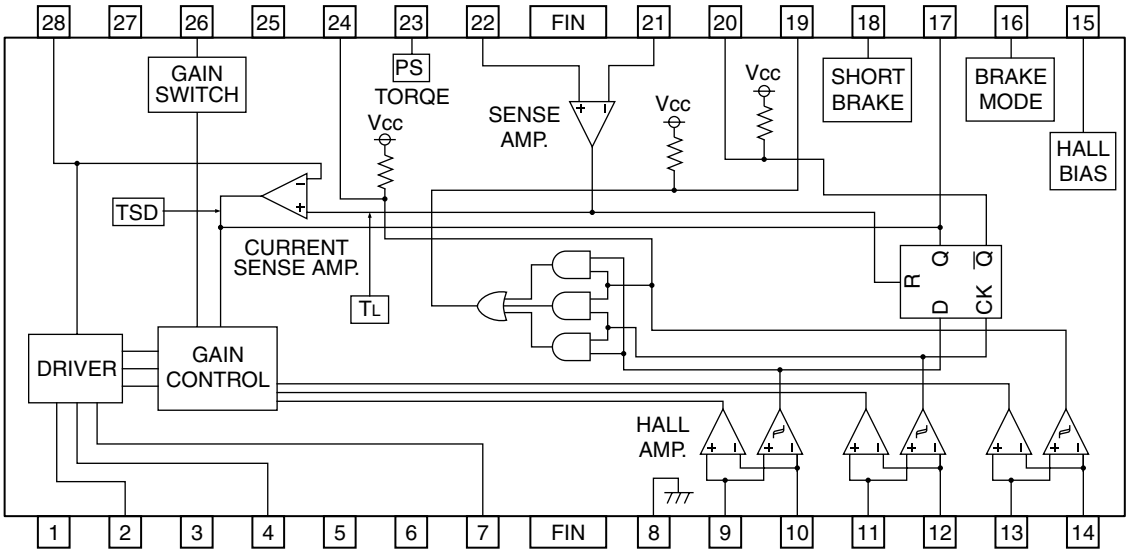


2. Truth table

INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	MOTOR
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

■ BA6664FM (IC251) : Motor driver

1. Terminal layout & Block diagram

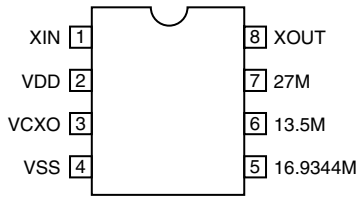


2. Pin function

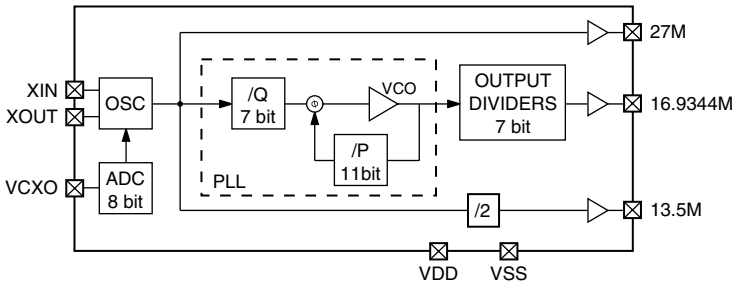
Pin No.	Symbol	Function
1	NC	Not connect
2	A3	Output terminal
3	NC	Not connect
4	A2	Output terminal
5	NC	Not connect
6	NC	Not connect
7	A1	Output terminal
8	GND	Ground terminal
9	H1+	Hall signal input terminal
10	H1-	Hall signal input terminal
11	H2+	Hall signal input terminal
12	H2-	Hall signal input terminal
13	H3+	Hall signal input terminal
14	H3-	Hall signal input terminal
15	VH	Hall bias terminal
16	BR	Brake mode switching terminal (Not connect)
17	CNF	Connecting terminal for phase compensating capacitor
18	SB	Short brake terminal
19	FG2	FG3-phase synthesizing signal output terminal (Not connect)
20	FR	Rotation detecting terminal (Not connect)
21	ECR	Reference terminal for output voltage control
22	EC	Output terminal for output voltage control
23	PS	Power save terminal
24	FG	FG signal output terminal
25	VCC	Power supply terminal
26	GSW	Gain switching terminal
27	VM	Power supply terminal for motor
28	RNF	Connecting terminal for output current detecting resistor
29,30	FIN	Ground

■ CY24203SC (IC502) : Clock generator

1. Terminal layout

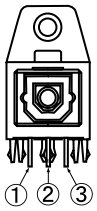


2. Block diagram

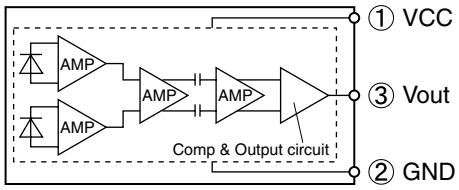


■ GP1FA351RZ (IC409) : Fiber optic receiver

1. Terminal layout

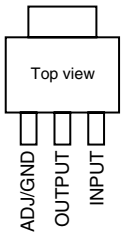


2. Block diagram

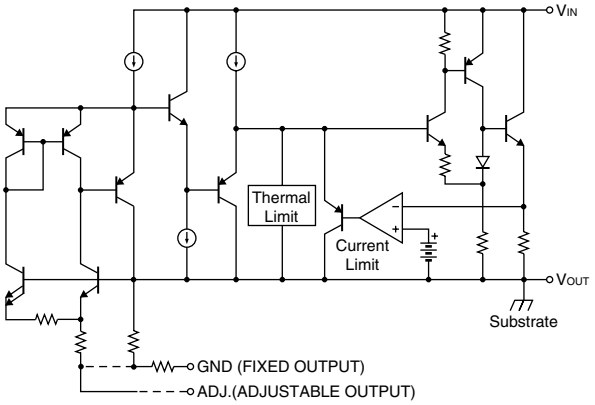


■ LM1117MP1.8 (IC511) : Regulator

1. Terminal layout

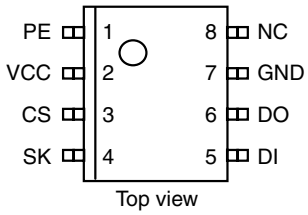


2. Block diagram



■ S-93C66AFJ (IC451) : Serial EEPROM

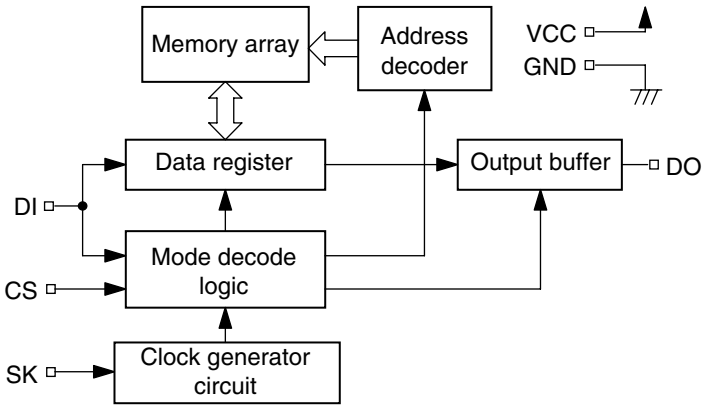
1. Terminal layout



2. Pin function

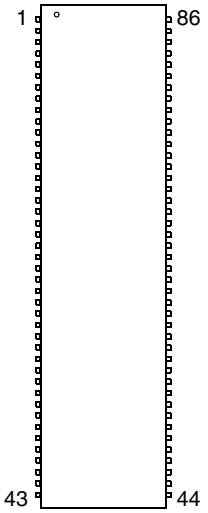
Pin No.	Symbol	Function
1	PE	Not connect
2	VCC	Power supply
3	CS	Chip select input
4	SK	Serial clock input
5	DI	Serial data input
6	DO	Serial data output
7	GND	Ground
8	NC	Not connect

3. Block diagram

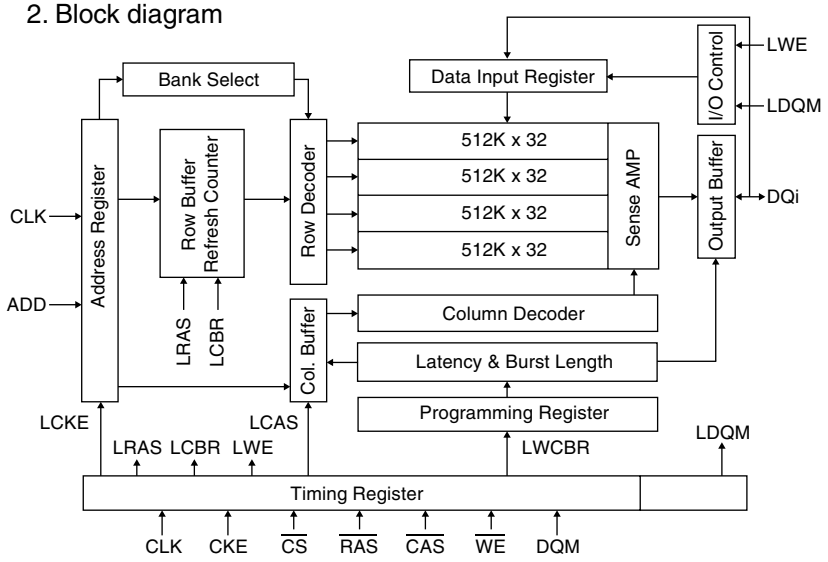


■ K4S643232E-TC60 (IC505) : 512K x 32 bit x 4 banks synchronous DRAM

1. Terminal layout



2. Block diagram

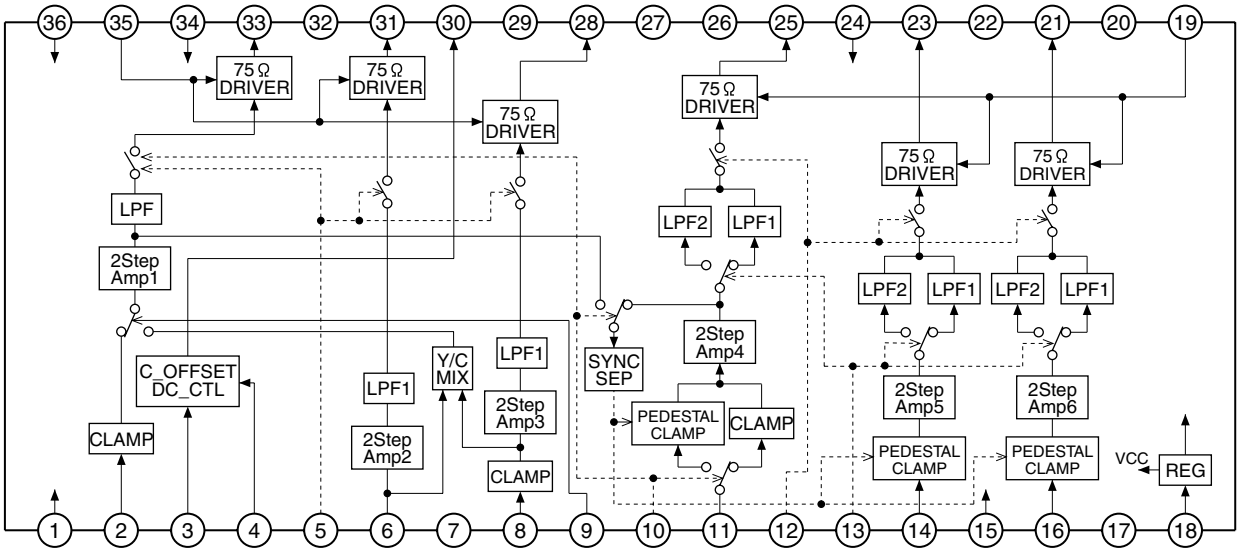


3. Pin function

Pin No.	Symbol	Function
1,15,29,43	VDD	Power for the input buffers and core logic.
2,4,5,7,8,10,11, 13,74,76,77,79, 80,82,83,85,31, 33,34,36,37,39, 40,42,45,47,48, 50,51,53,54,56	DQ0 - DQ31	Data inputs/outputs are multiplexed on the same pins.
3,9,35,41,49 55,75,81	VDDQ	Isolated power supply for the output buffers to provide improved noise immunity.
6,12,32,38,46 52,78,84	VSSQ	Isolated ground for the output buffers to provide improved noise immunity.
14,21,30,57, 69,70,73	N.C	This pin is recommended to be left no connection on the device.
16,71,28,59	DQM0 - DQM3	Makes data output Hi-Z, t_{SHZ} after the clock and masks the output. Blocks data input when DQM active.
17	$\overline{WE}$	Enables write operation and row precharge. Latches data in starting from $\overline{CAS}$, $\overline{WE}$ active.
18	$\overline{CAS}$	Latches column addresses on the positive going edge of the CLK with $\overline{CAS}$ low. Enables column access.
19	$\overline{RAS}$	Latches row addresses on the positive going edge of the CLK with $\overline{RAS}$ low. Enables row access & precharge.
20	$\overline{CS}$	Disables or enables device operation by masking or enabling all inputs except CLK, CKE and DQM.
22,23	BA0,BA1	Selects bank to be activated during row address latch time. Selects bank for read/write during column address latch time.
24,25 - 27, 60 - 66	A10,A0 - A2, A3 - A9	Row/column addresses are multiplexed on the same pins. Row address : RA_0 - RA_{10}, Column address : CA_0 - CA_7
44,58,72,86	VSS	Ground for the input buffers and core logic.
67	CKE	Masks system clock to freeze operation from the next cycle. CKE should be enabled at least one cycle prior to new command. Disables input buffers for power down mode.
68	CLK	Active on the positive going edge to sample all inputs.

■ LA73054 (IC601) : Video driver

1. Terminal layout & block diagram

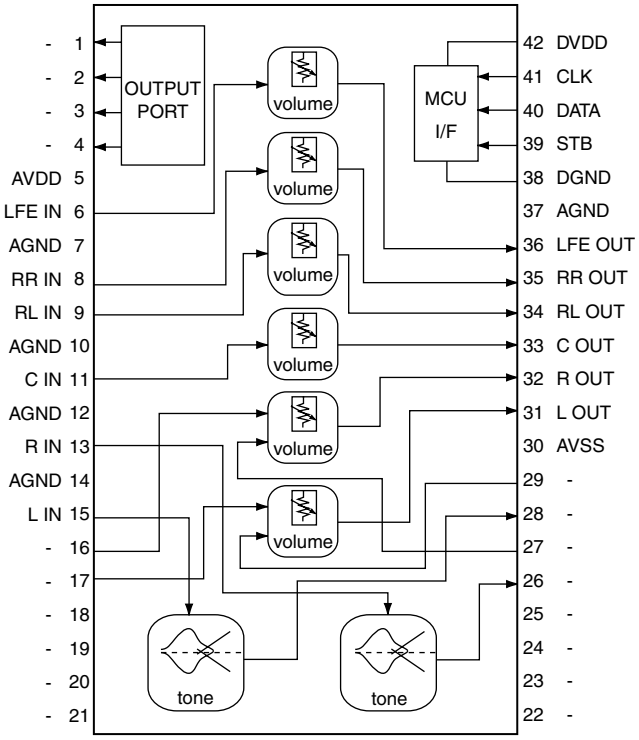


2. Pin function

Pin No.	Symbol	I/O	Function
1,24,34	VCC	-	Power supply
2	COMPOSITE IN	I	Composite video signal input (Not connect)
3	SQUEEZE SW	I	Selecting squeeze mode
4	LETTER-BOX SW	I	Selecting letter box mode
5	MUTE1 SW	I	Composite/S signal mute selection
6	CHROMA IN	I	Chrominance signal input
7,17,20,22 26,27,29,32	GND	-	Ground
8	Y-1 IN	I	Brightness signal input
9	YC MIX SW	I	Y/C-MIX control
10	RGB SW	I	Selection of a kind of signal (11pin)
11	Y-2 IN	I	Brightness signal input or baseband signal
12	MUTE2 SW	I	Component signal mute selection
13	LPF SW	I	Selection of a kind of component LPF
14	Cb IN	I	Component signal (Cb) input or baseband signal
15	AMP-2 SW	I	Selecting amplifier gain for component signal
16	Cr IN	I	Component signal (Cr) input or baseband signal
18	REG	O	Capacitor terminal for regulator
19	DRIVE-2 SW	I	2drive/1drive select for component signal
21	Cr OUT	O	Component signal (Cr) output
23	Cb OUT	O	Component signal (Cb) output
25	Y-2 OUT	O	Brightness signal output
28	Y-1 OUT	O	Brightness signal output
30	C-DC OUT	O	DC voltage output (Not connect)
31	CHROMA OUT	O	Chrominance signal output
33	COMPOSITE OUT	O	Composite video signal output
35	DRIVE SW	I	2drive/1drive select for composite/S signal
36	AMP-1 SW	I	Selecting amplifier gain for composite/S signal

■ M62446FP (IC153) : 6CH Master volume

1. Terminal layout & Block Diagram



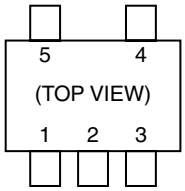
2.Pin function

Pin No.	Symbol	I/O	Function
1	-	-	SURROUND control terminal (Not connect)
2	-	-	BASS BOOST control terminal
3	-	-	Input attenuator control terminal
4	-	-	MUTING control terminal
5	AVDD	-	Analog positive power supply terminal
6	LFE IN	I	SUB Woofer volume signal input terminal
7	AGND	-	Analog ground terminal
8	RR IN	I	R ch volume signal input terminal for rear speaker
9	RL IN	I	L ch volume signal input terminal for rear speaker
10	AGND	-	Analog ground terminal
11	C IN	I	Center volume signal input terminal
12	AGND	-	Analog ground terminal
13	R IN	I	R ch volume signal input terminal
14	AGND	-	Analog ground terminal
15	L IN	I	L ch volume signal input terminal
16,17	-	-	Not connect
18	-	-	Frequency adjustment terminal tone/treble
19~21	-	-	Frequency adjustment terminal tone/bass
22	-	-	Tone output terminal
23,24	-	-	Frequency adjustment terminal tone/bass
25	-	-	Frequency adjustment terminal tone/treble
26	-	-	Frequency adjustment terminal tone/bass
27	-	-	L/R volume input terminal
28	-	-	Tone output terminal

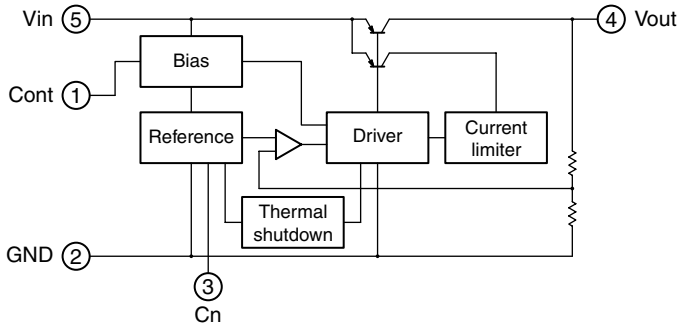
Pin No.	Symbol	I/O	Function
29	-	-	L/R volume input terminal
30	AVSS	-	Analog negative power supply terminal
31	L OUT	O	L ch output
32	R OUT	O	R ch output
33	C OUT	O	Center volume signal output terminal
34	RL OUT	O	L ch volume signal output terminal for rear speaker
35	RR OUT	O	R ch volume signal output terminal for rear speaker
36	LFE OUT	O	SUB Woofer volume signal output terminal
37	AGND	-	Analog ground terminal
38	DGND	-	Digital ground terminal
39	STB	I	Latch input terminal
40	DATA	I	Volume data input terminal
41	CLK	I	Clock input terminal for data transfer
42	DVDD	-	Digital power supply terminal

■ MM1613DN (IC402) : Regulator

1. Terminal layout



2. Block diagram

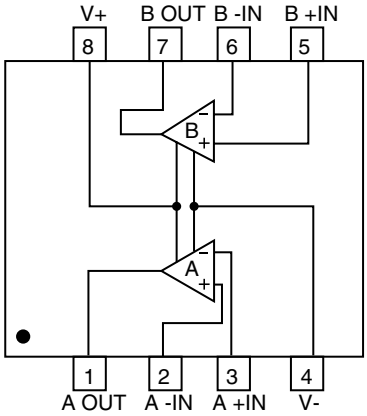


3. Pin function

Pin No.	Symbol	Function
1	Cont	ON/OFF Control pin Cont: H → Vo: ON; Cont: L → Vo: OFF Cont pin must be connected with V_{IN} pin, if it is not used.
2	GND	Ground
3	Cn	Noise decrease pin, Connecting 0.01uF capacitor can decrease output noise.
4	Vout	If the noise decrease capacitor is not connected, the pin may be influenced by outside noise. Output pin, The capacitor must be connected with output pin more than 1uF.
5	Vin	Input pin The capacitor is required to connect with input pin more than 1uF.

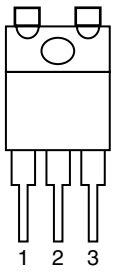
■ NJM4580M (IC158,IC159,IC160) : Dual operational amplifier

1. Terminal layout & Block diagram



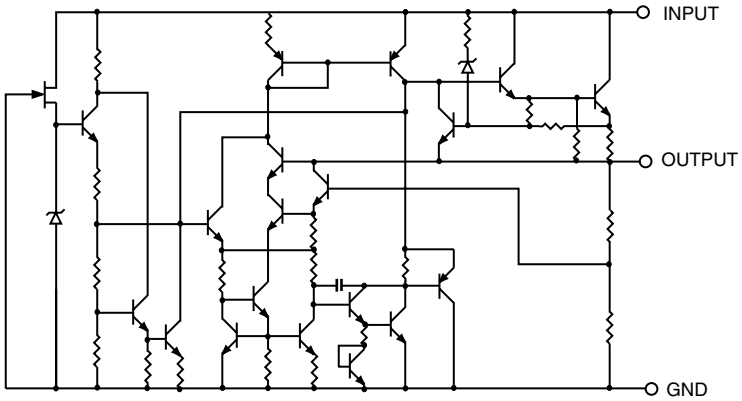
■ NJM78M05FA (IC805,IC953) : Regulator

1. Terminal layout



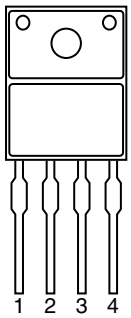
1.INPUT
2.GND
3.OUTPUT

2. Block diagram

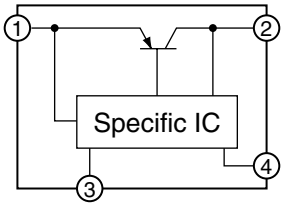


■ PQ05RD21 (IC951) : Regulator

1. Terminal layout



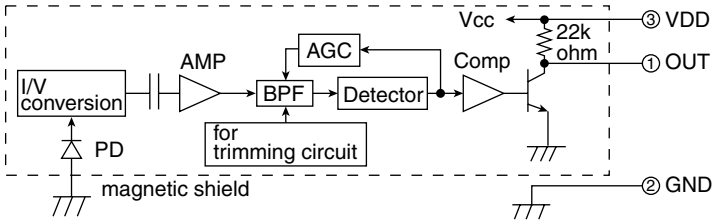
2. Block diagram



1.IN
2.OUT
3.GND
4.CTRL

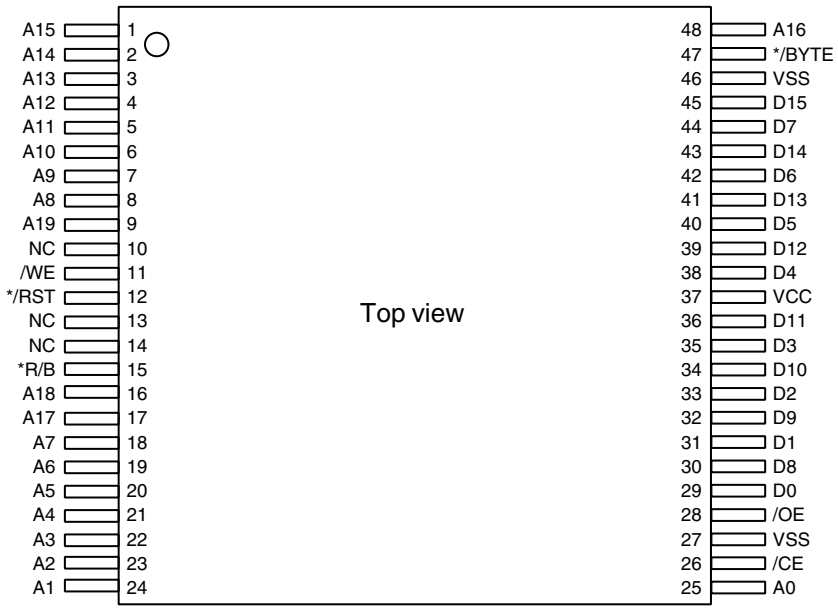
■ RPM6938-SV4 (IC711,IC871) : Remote control receiver

1. Block diagram

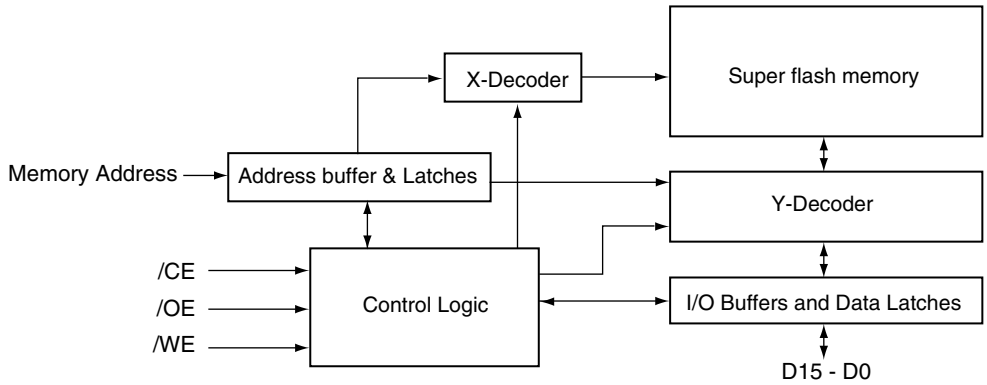


■ SST39VF160-7CEK (IC509) : 16 Mbit multi-purpose flash memory

1. Terminal layout



2. Block diagram

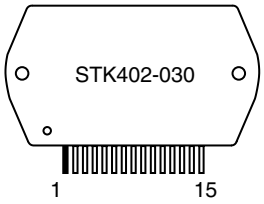


3. Pin function

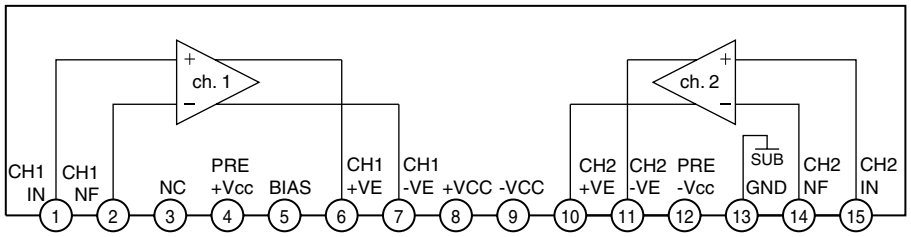
Pin No.	Symbol	Function
1 - 9, 16 - 25,48	A19 - A0	Address inputs : To provide memory addresses. During Sector-Erase A19 - A11 address lines will select the sector. During Block-Erase, A19 - A15 address line will select the block.
10,12 - 15,47	NC	No connection : Unconnected pins
11	/WE	Write Enable : To control the Write operations
26	/CE	Chip Enable : To activate the device when CE# is low
27,46	VSS	Ground
28	/OE	Output Enable : To gate the data output buffers
29 - 36, 38 - 45	D15 - D0	Data input/output : To output data during Read cycles and receive input data during write cycles. Data is internally latched during a write cycle. The outputs are in tri-state when OE# or CE# is high.
37	VCC	Power supply : To provide power supply voltage (2.7 - 3.6V)

■ STK402-030 (IC106) : Power amplifier

1.Terminal layout

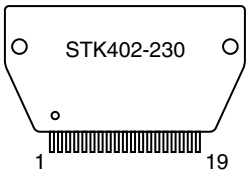


2.Block diagram

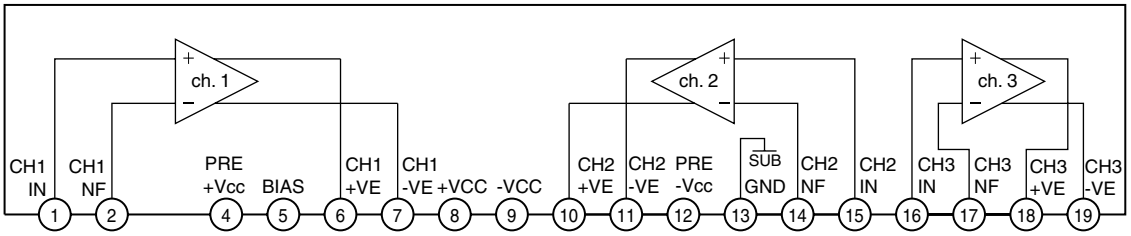


■ STK402-230 (IC107) : Power amplifier

1. Terminal layout

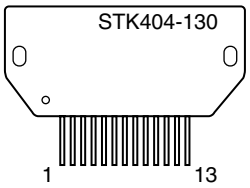


2.Block diagram

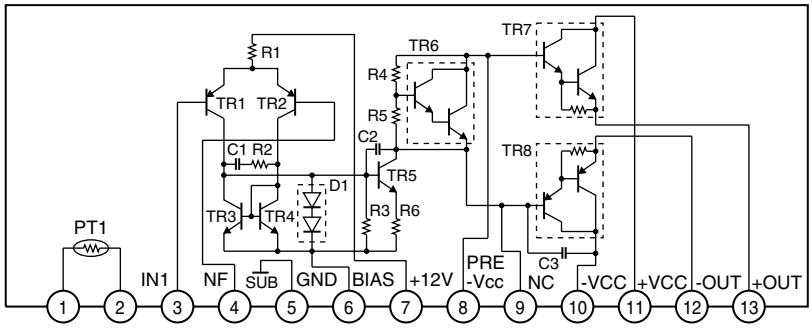


■ STK404-130 (IC105) : Power amplifier

1.Terminal layout

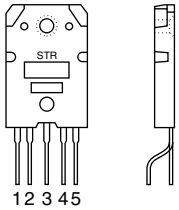


2.Block diagram

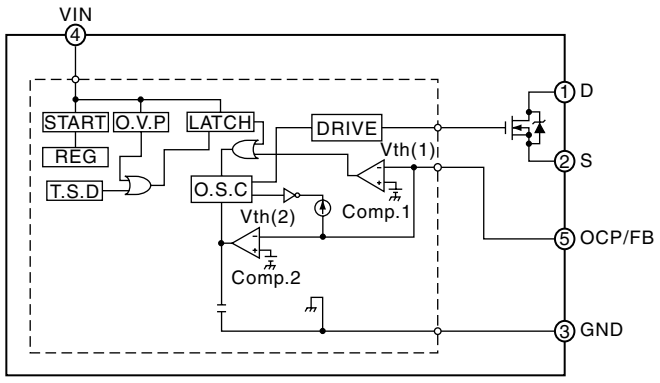


■ STR-G6651 (IC901) : Switching regulator

1.Terminal layout



2.Block diagram



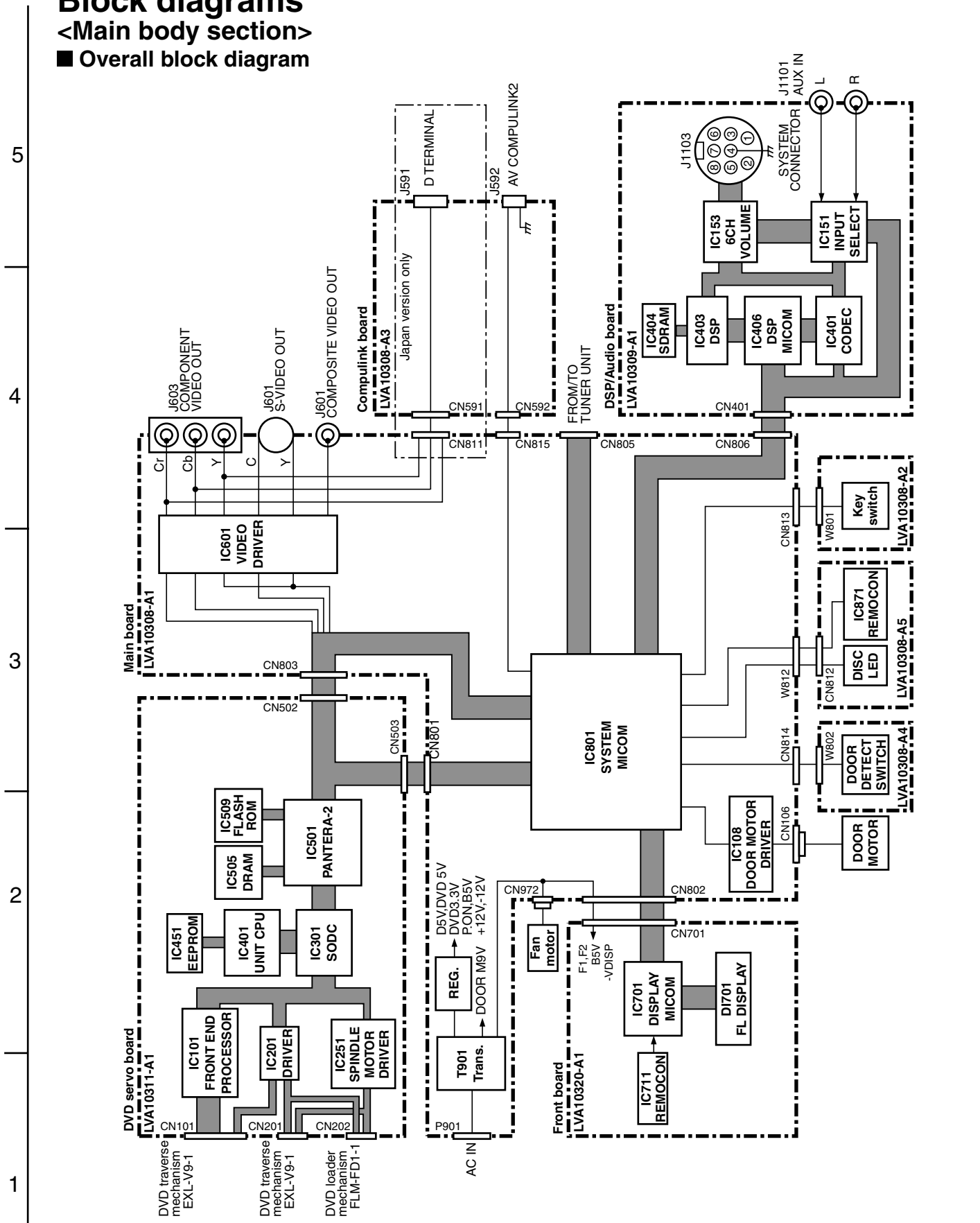
< MEMO >

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (▬), diode (▬) and ICP (⬤) or identified by the "⚠" mark nearby are critical for safety.
(This regulation does not correspond to J and C version.)

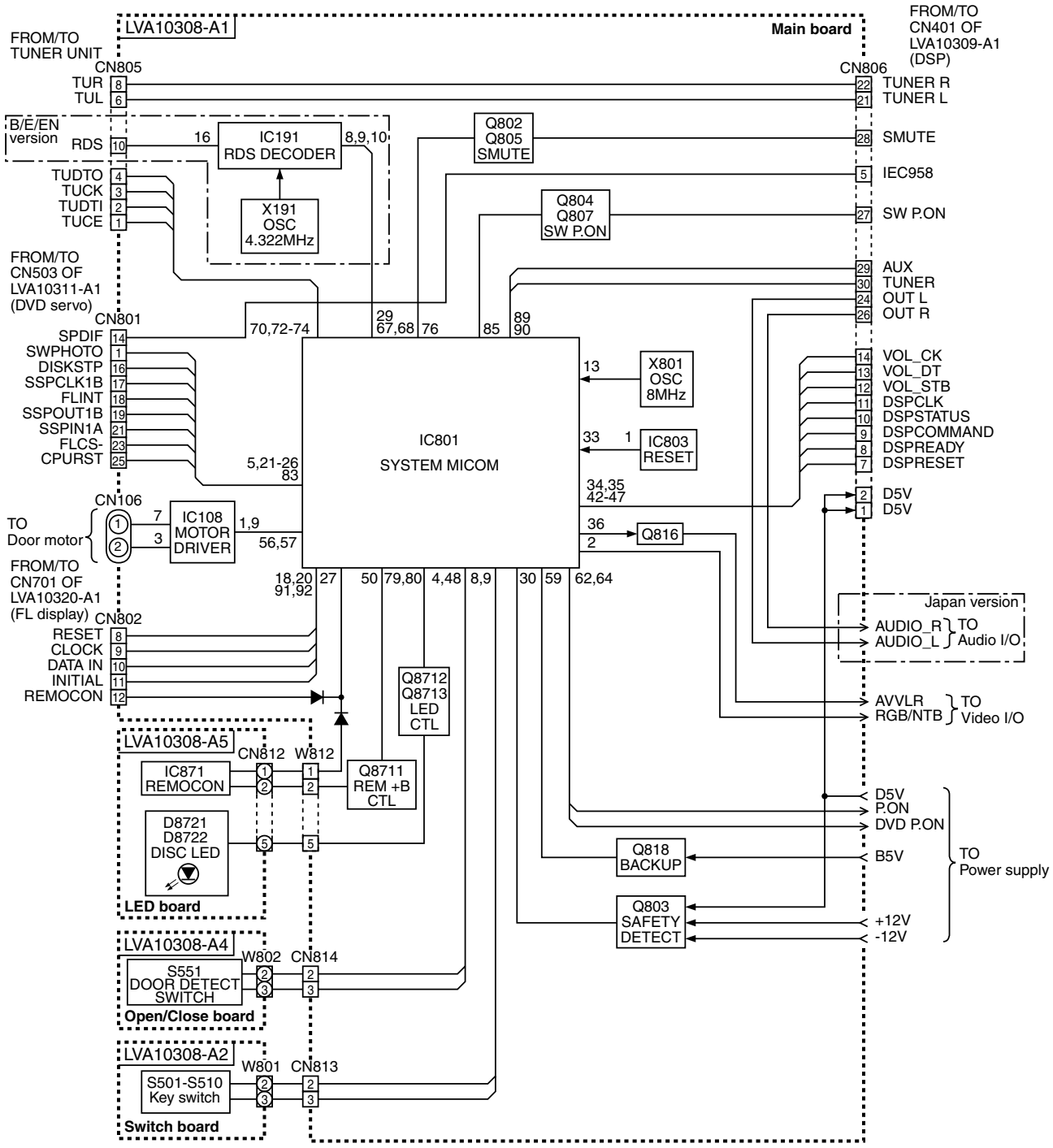
Block diagrams

<Main body section>

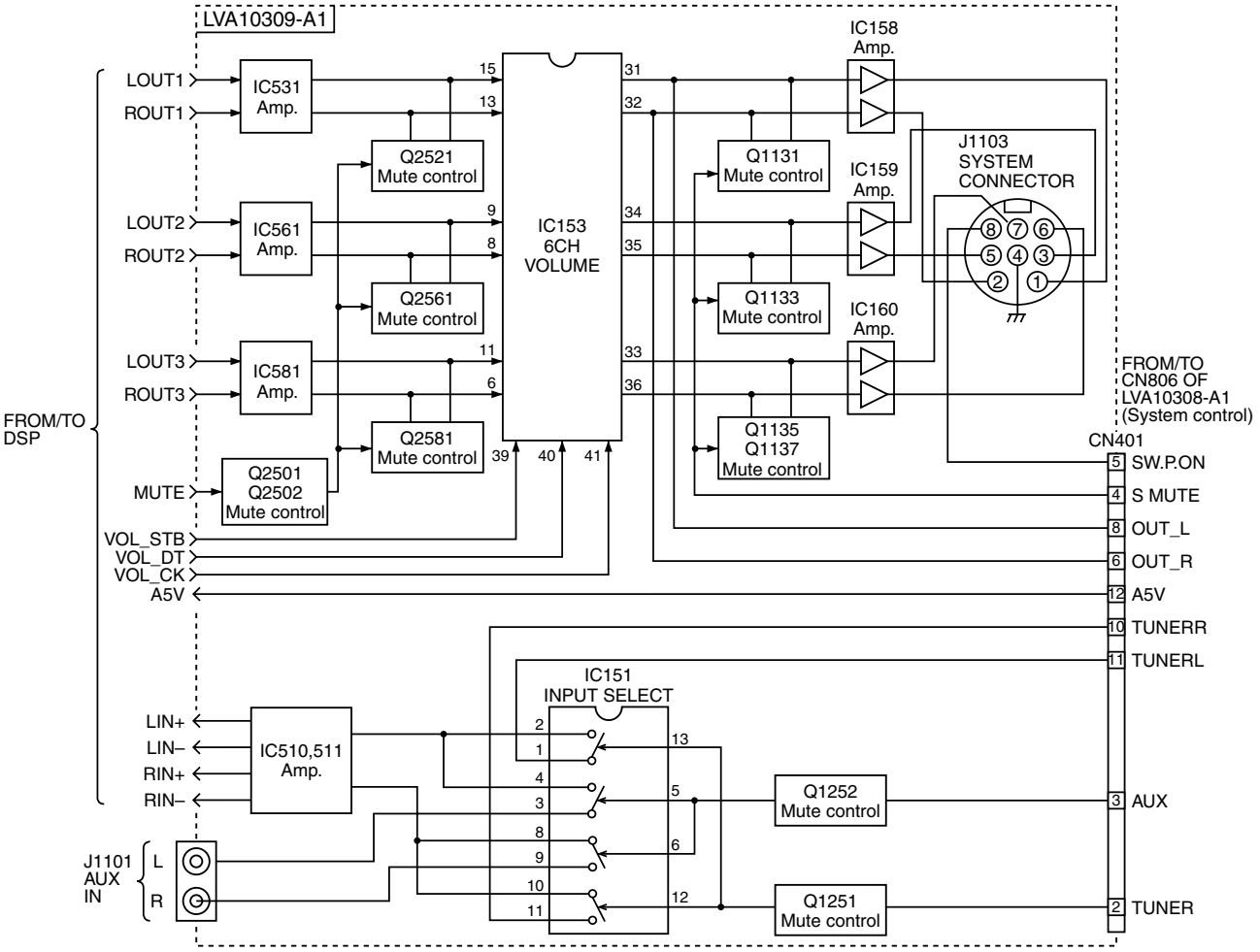
■ Overall block diagram



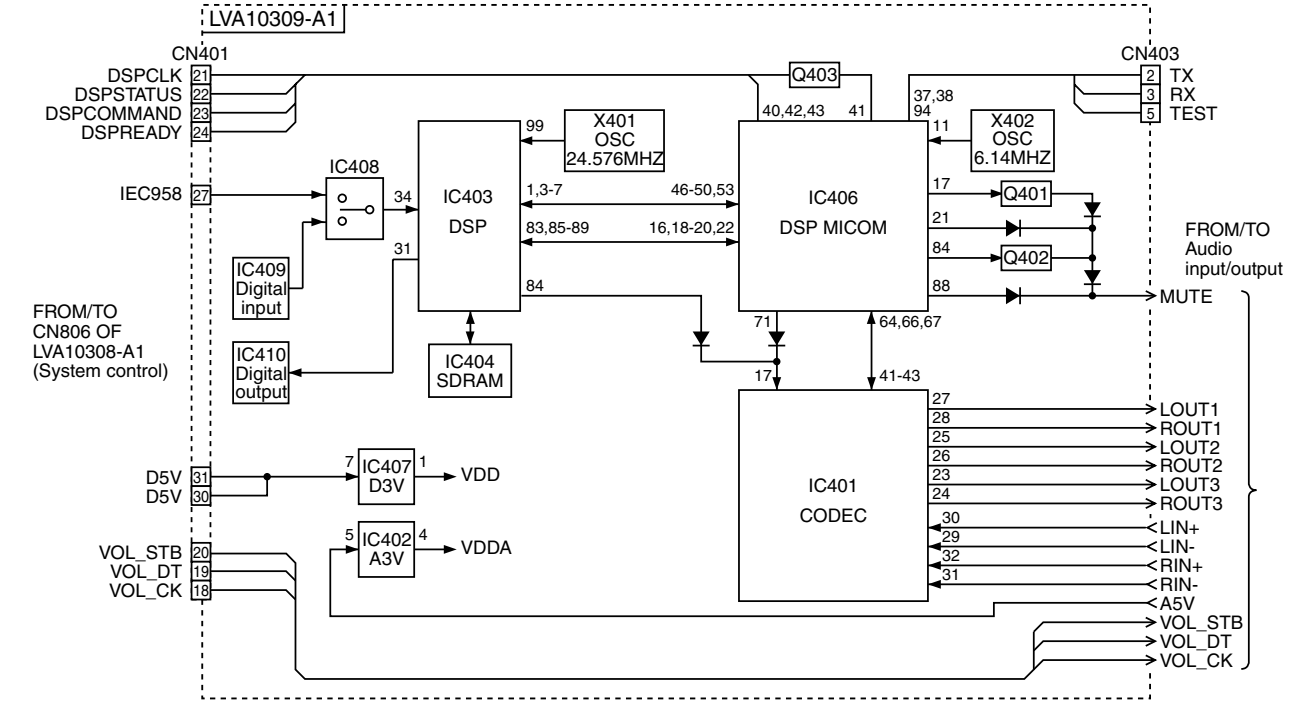
■ System control section



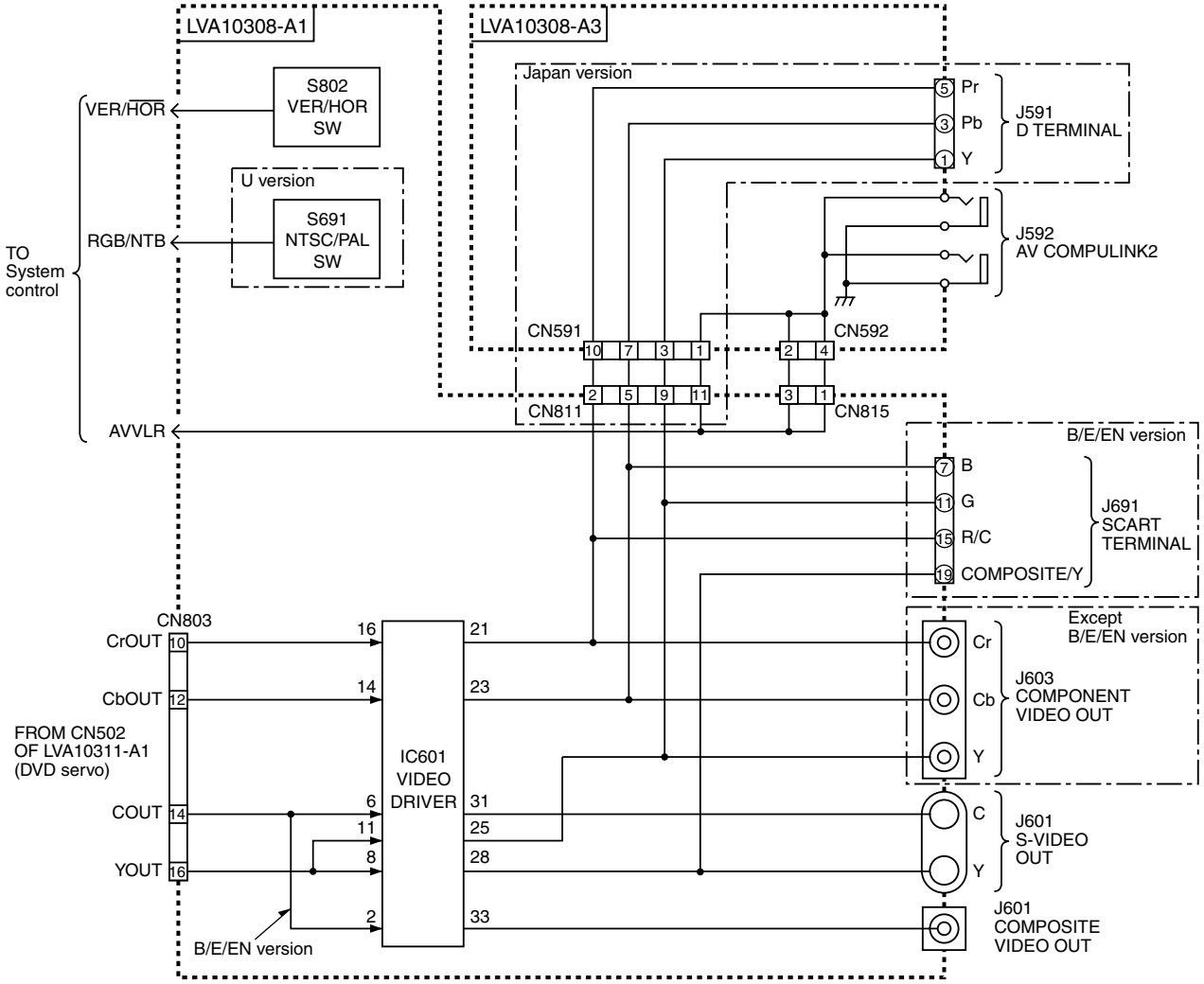
■ Audio input/output section



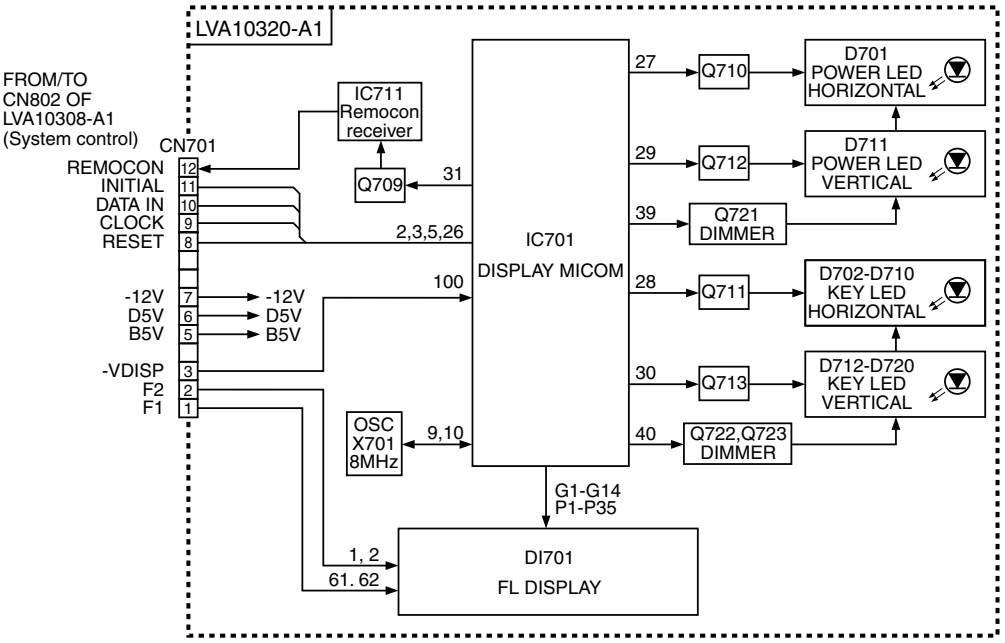
■ DSP section



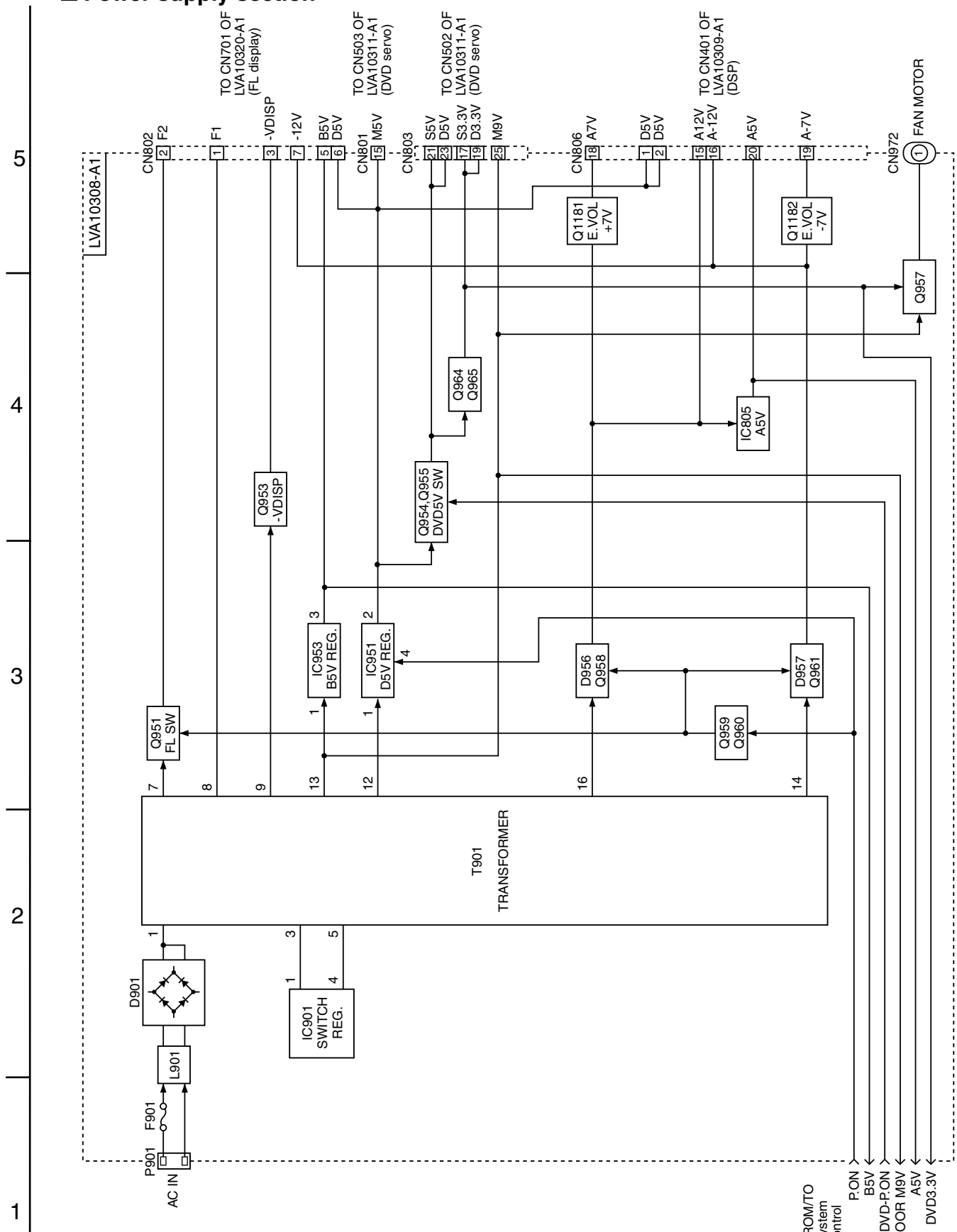
■ Video output section



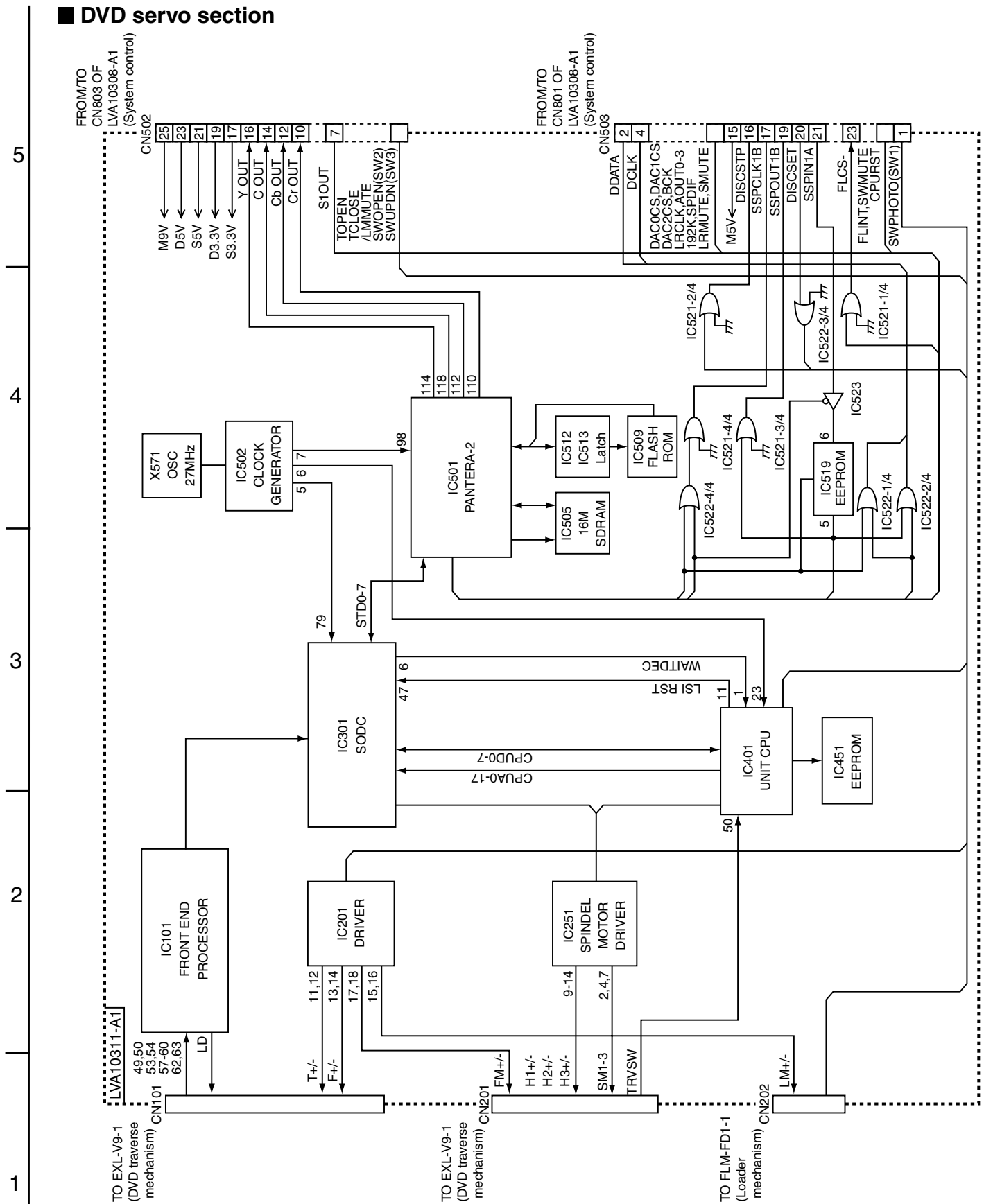
■ FL display section



■ Power supply section

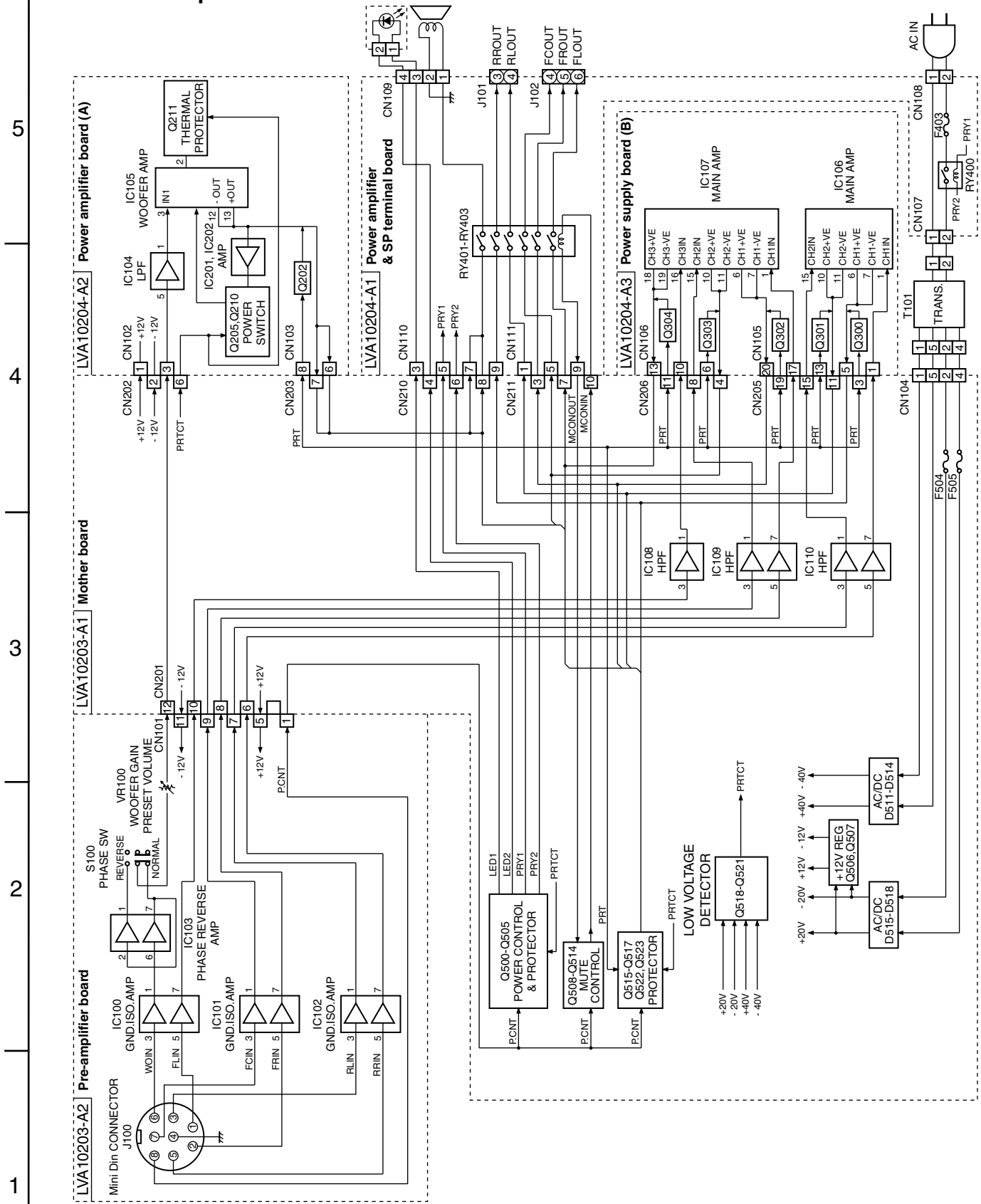


■ DVD servo section



<Speaker section>

■ SP-THV70 powered subwoofer section

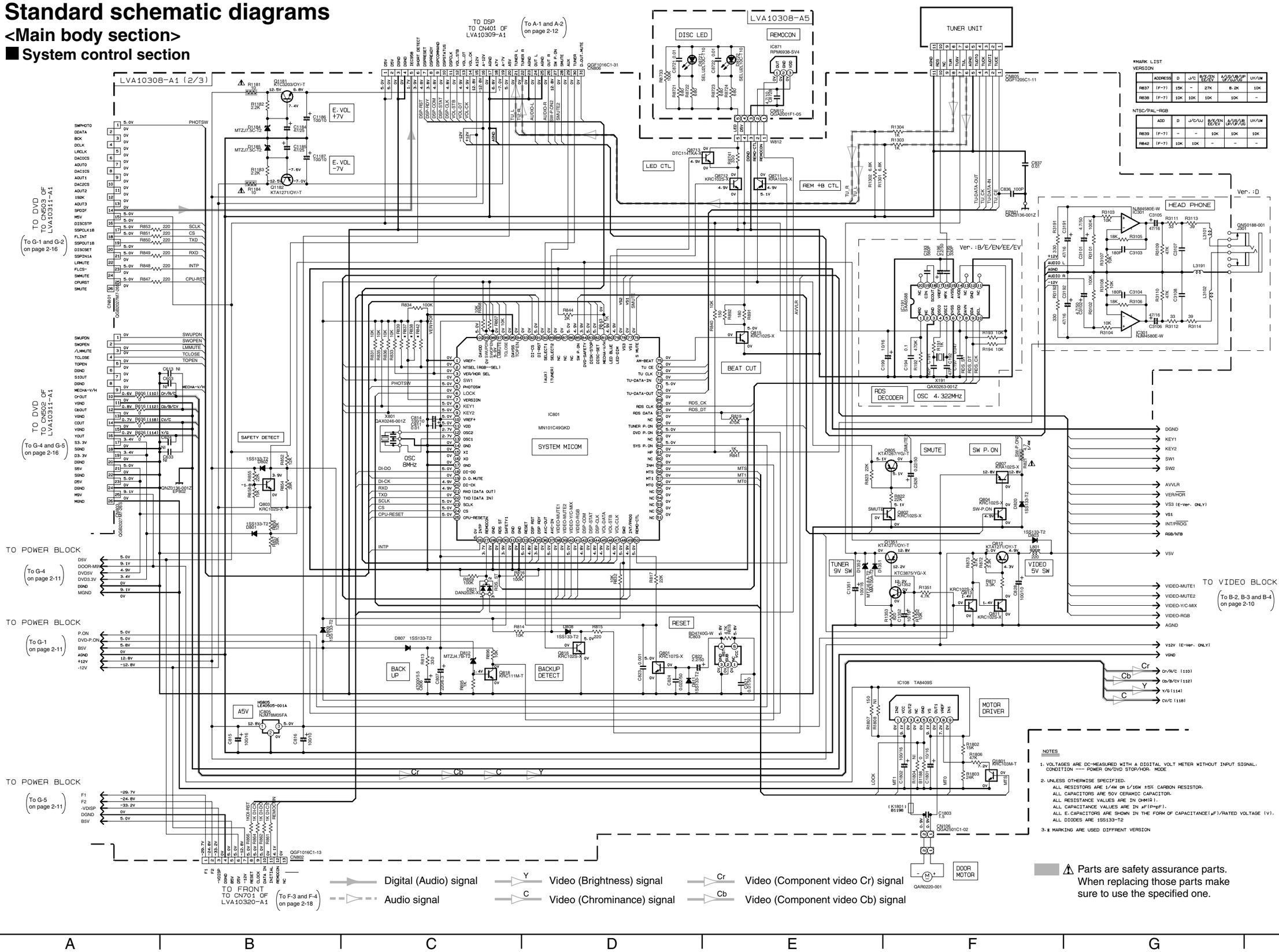


< MEMO >

Standard schematic diagrams

<Main body section>

■ System control section



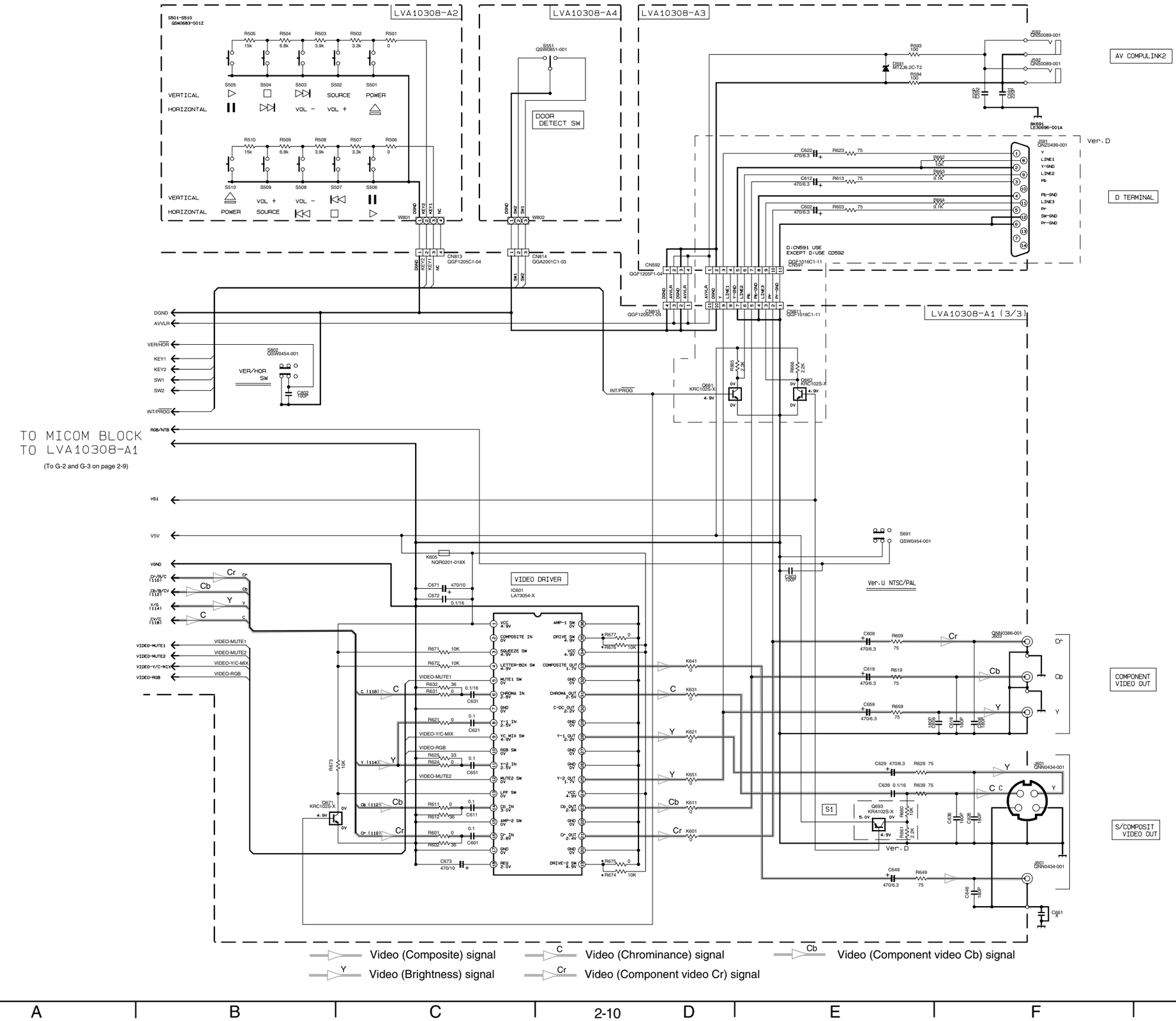
NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
   CONDITION ---- POWER ON/DVD STOP/HOR. MODE
2. UNLESS OTHERWISE SPECIFIED.
   ALL RESISTORS ARE 1/4W OR 1/16W ±5% CARBON RESISTOR.
   ALL CAPACITORS ARE 50V CERAMIC CAPACITOR.
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE(μF)/RATED VOLTAGE (V).
   ALL DIODES ARE 1SS133-T2
3. ※ MARKING ARE USED DIFFRENT VERSION

	ADDRESS	D	J/C	B/E/EN EE/EV	A/US/UB UP/UF/UG	UY/UW
R837	(F-7)	15K	-	27K	8.2K	10K
R838	(F-7)	10K	10K	10K	10K	-

	ADD	D	J/C/UJ	B/E/EN EE/EV	A/US/UB UP/UF/UG	UY/UW
R839	(F-7)	-	-	10K	10K	10K
R842	(F-7)	10K	10K	-	-	-

■ Video output section



DVD VIDEO OUT

	ALL VERSON
CV/C (118)	C
Y/S (114)	Y
CB/CB/CV (112)	Cb
Cr/CB/C (110)	Cr

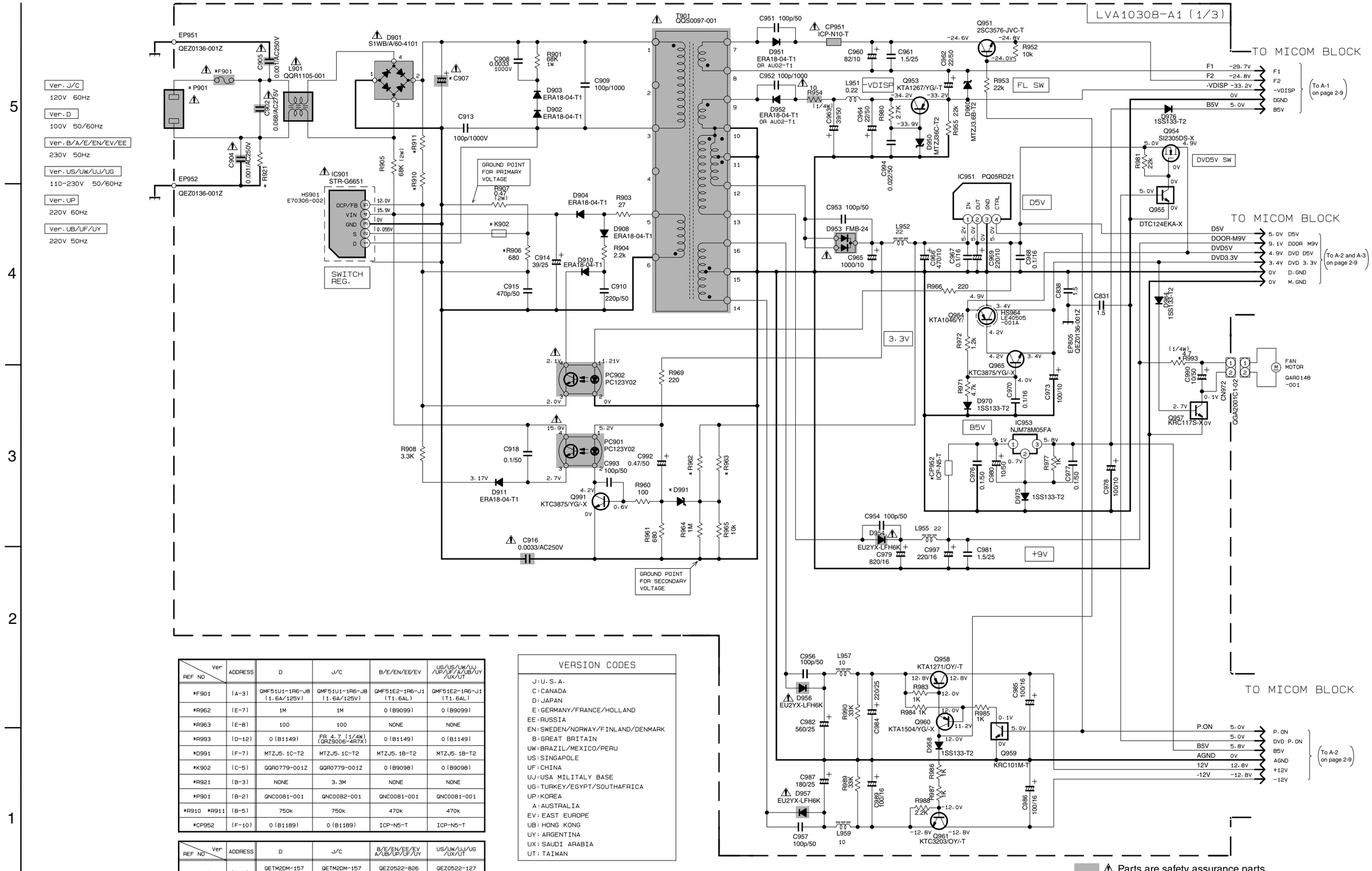
IC601 INPUT SIGNAL

	ALL VERSON
2/COMPOSITE IN	---
6/CHROMA IN	C
8/Y-1 IN	Y
11/Y-2 IN	Y
14/Cb IN	Cb
16/Cr IN	Cr

*MARK LIST

	ADDRESS	D	J/C	OTHER VER.
R674	(I-10)	—	○	○
R675	(I-10)	○	—	—
R676	(L-10)	○	○	—
R677	(L-10)	—	—	○

■ Power supply section



Ver / REF NO	ADDRESS	D	J/C	B/E/EN/EE/EV	US/UW/UJ/UG/UP/UF/UB/UY/UX/UT
*F901	(A-3)	QMF51U1-1R6-J8 (1.6A/125V)	QMF51U1-1R6-J8 (1.6A/125V)	QMF51E2-1R6-J1 (T1.6AL)	QMF51E2-1R6-J1 (T1.6AL)
*R962	(E-7)	1M	1M	0 (B9099)	0 (B9099)
*R963	(E-8)	100	100	NONE	NONE
*R993	(D-12)	0 (B1149)	FR 4.7 (1/4W) (QRZ9006-4R7X)	0 (B1149)	0 (B1149)
*D991	(F-7)	MTZJ5.1C-T2	MTZJ5.1C-T2	MTZJ5.1B-T2	MTZJ5.1B-T2
*K902	(C-5)	QGR0779-001Z	QGR0779-001Z	0 (B9098)	0 (B9098)
*R921	(B-3)	NONE	3.3M	NONE	NONE
*P901	(B-2)	QNC0081-001	QNC0082-001	QNC0081-001	QNC0081-001
*R910 *R911	(B-5)	750k	750k	470k	470k
*CP952	(F-10)	0 (B1189)	0 (B1189)	ICP-N5-T	ICP-N5-T

Ver / REF NO	ADDRESS	D	J/C	B/E/EN/EE/EV A/UB/UP/UF/UY	US/UW/UJ/UG /UX/UT
*C907	(B-5)	QETM2DM-157 (150/200)	QETM2DM-157 (150/200)	QEZ0522-B26 QEZ0374-B26 (82/400)	QEZ0522-127 QEZ0445-127 (120/400)

VERSION CODES

J : U.S.A.
C : CANADA
D : JAPAN
E : GERMANY/FRANCE/HOLLAND
EE : RUSSIA
EN : SWEDEN/NORWAY/FINLAND/DENMARK
B : GREAT BRITAIN
UW : BRAZIL/MEXICO/PERU
US : SINGAPOLE
UF : CHINA
UJ : USA MILITALY BASE
UG : TURKEY/EGYPT/SOUTHAFRICA
UP : KOREA
A : AUSTRALIA
EV : EAST EUROPE
UB : HONG KONG
UY : ARGENTINA
UX : SAUDI ARABIA
UT : TAIWAN

⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

■ DSP section

LVA10309-A1

Version Table

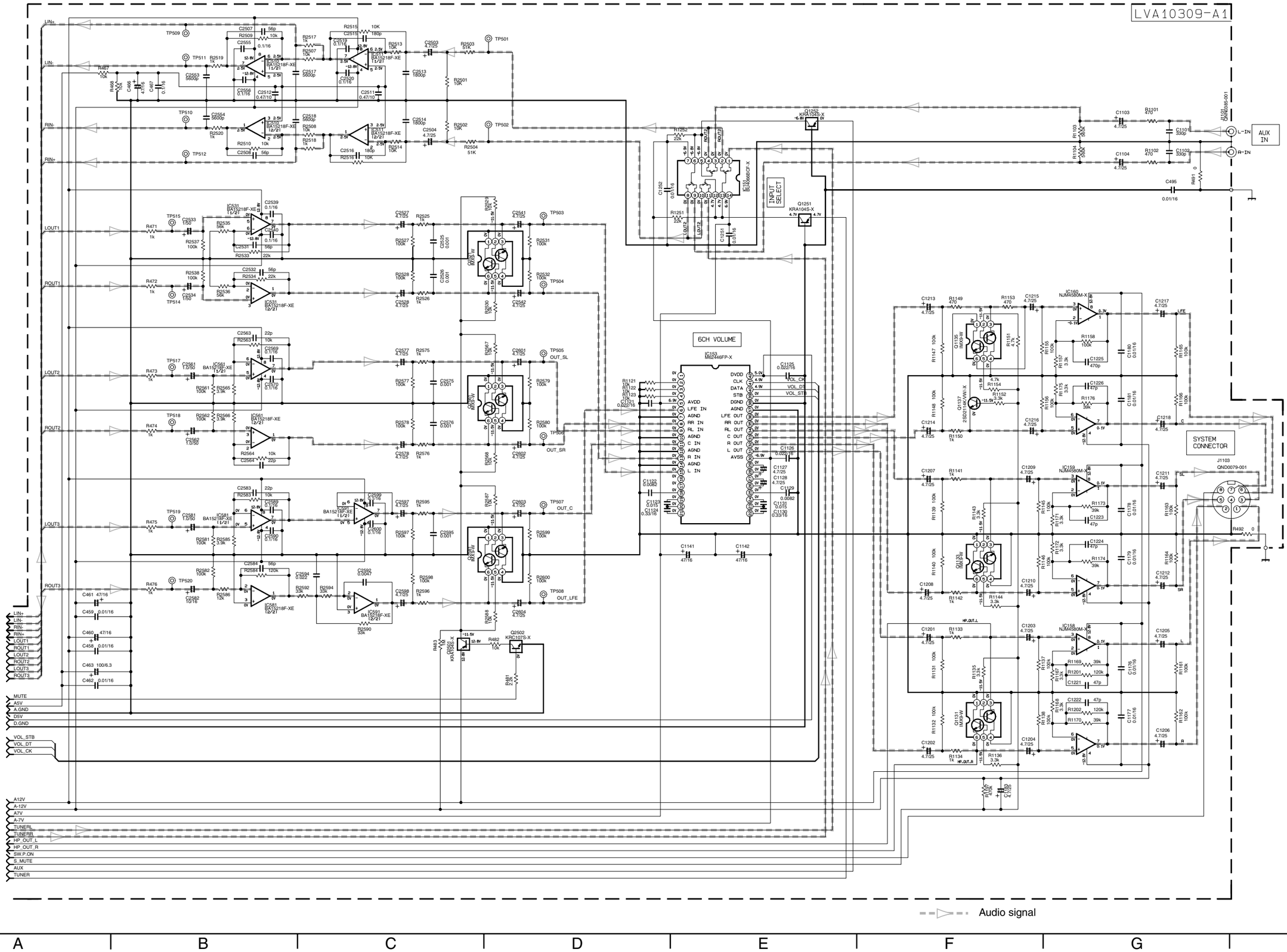
Ver	IC410	C412	Q404	R421	D407
D	USE	USE	USE	USE	USE
Other	NONE	NONE	NONE	NONE	NONE

IC409 GP1FA351RZ
IC410 GP1FA351TZ
IC408 TC74HC00AF-W
IC401 AK4527BVQP CODEC
IC402 MM1613DN-X
IC403 TC9446F-025 DSP
IC404 W24L010AJ-12-X RAM
IC406 UPD784215AGC167 DSP MICOM
IC407 MM1563DF-X
IC421 NQR0321-001X
X401 NAX0385-001X 24.576MHz
X402 NAX0275-001X OSC 6.14MHz
K401 NQR0319-001X
Q401 KRA104S-X
Q402 KRC107S-X
Q403 KRC107S-X
Q404 KRC107S-X
D401 DAN235K-X
D402 DAP202K-X
D403 DAN202K-X
D404 DAN202K-X
D405 DAN202K-X
D406 DAP202K-X
D407 DAN202K-X
A3V
D3V
DSP_RST
ERR
FILTER SELECT
CN401 QGF1016F2-31W
CN403
TO CN806 OF LVA10308-A1
To C-5 and D-5 on page 2-9
To A-1 and A-2 on page 2-13

Digital (Audio) signal
Audio signal

A B C 2-12 D E F G H

■ Audio input/output section



■ DVD servo section 1/4

LVA10311-A1(1/3)

TO DVD TRAVERSE MECHA EXL-V9-1

TO DVD LOADER MECHA FLM-FD1-1

FRONT END PROCESSOR

IC101 AN8705FH-V

DRIVER

IC201 BA5983FM-X

SP MOTOR DRIVER

IC251 BA6664FM-X

SODC

IC301 MN103S2M3EGA

UNIT CPU

IC401 MN103LG3GLF1

IC457 S-93C56AJ-X

16.9MHz

13.5MHz

To A-5 on page 2-15

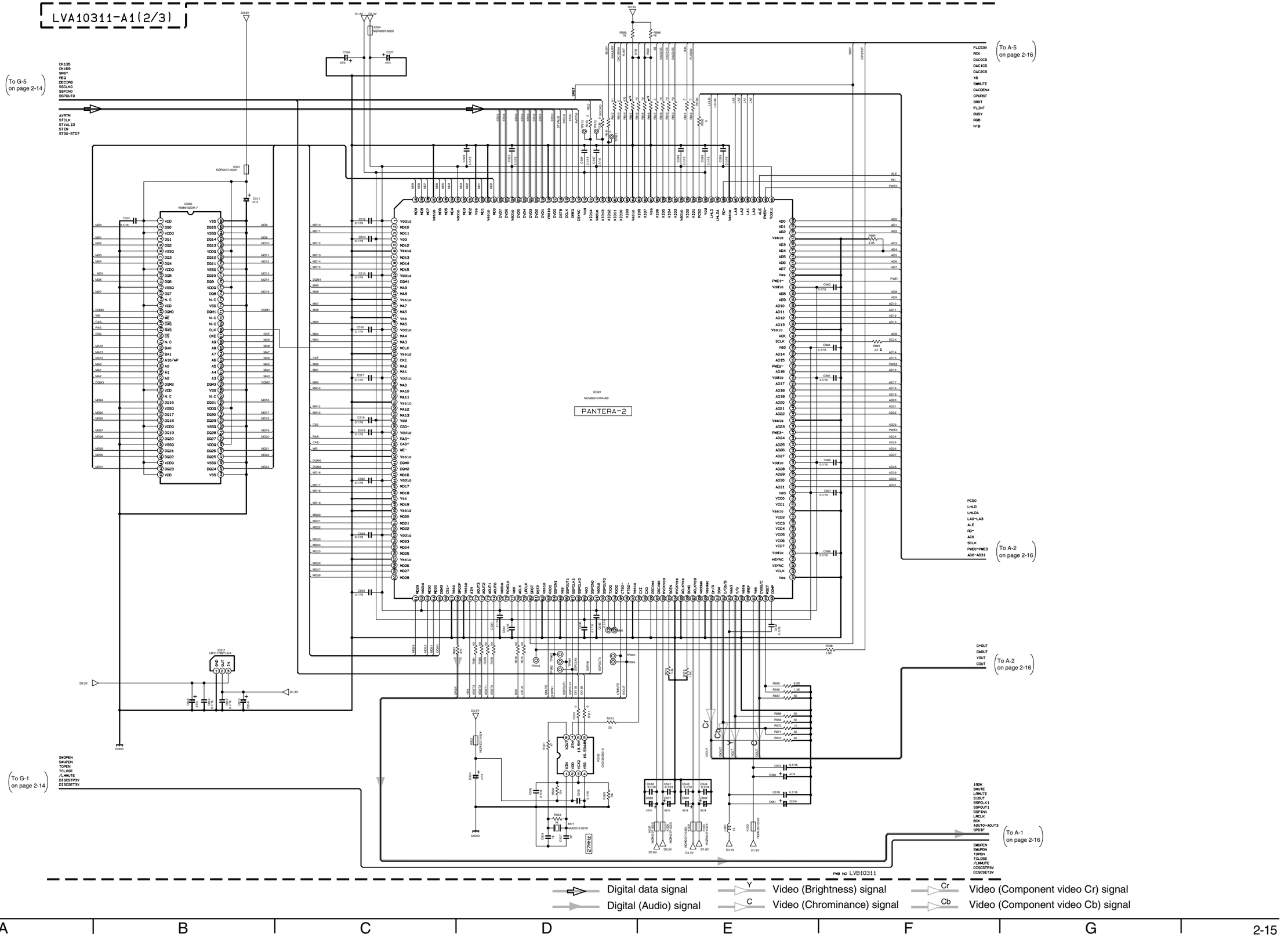
To A-1 on page 2-15

SWOPEN
SWUPDN
TOPEN
TCLOSE
/LMMUTE
DISCSTP3V
DISCSET3V

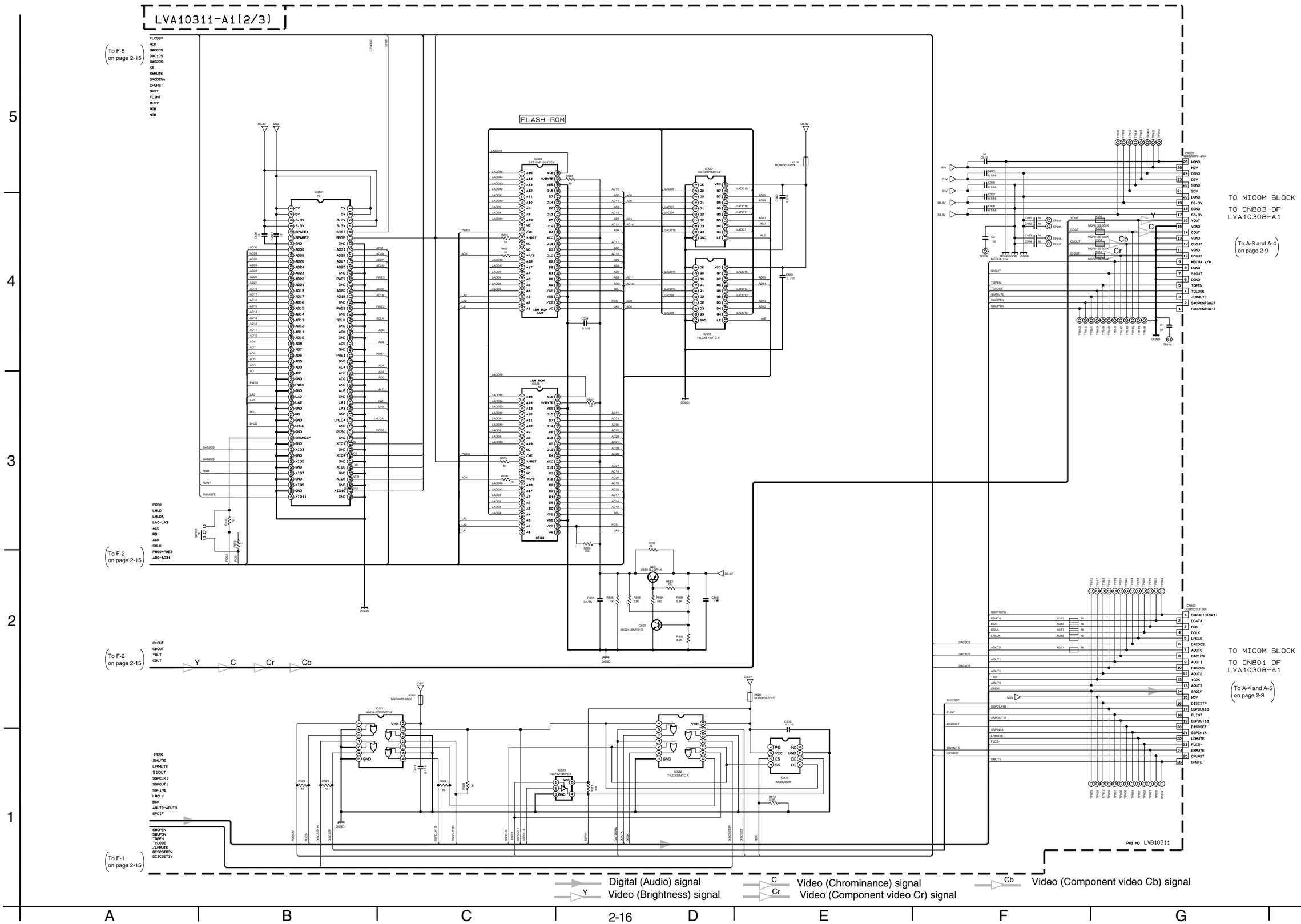
PWB NO LVB10311

Digital data signal

■ DVD servo section 2/4



■ DVD servo section 3/4



■ DVD servo section 4/4 (Voltage value)

IC101

NO	DC(V)	NO	DC(V)
1	0V	51	2.1V
2	4.4V	52	2.1V
3	3.7V	53	2.1V
4	4.4V	54	2.1V
5	0V	55	4.9V
6	1.7V	56	2.1V
7	1.7V	57	2.1V
8	1.9V	58	2.1V
9	3.3V	59	2.1V
10	0V	60	2.1V
11	3.3V	61	0V
12	3.3V	62	2.1V
13	3.3V	63	2.1V
14	3.3V	64	0V
15	0V		
16	1.7V		
17	1.5V		
18	1.7V		
19	1.7V		
20	0V		
21	1.7V		
22	0V		
23	1.7V		
24	0.9V		
25	1.7V		
26	0V		
27	0V		
28	4.9V		
29	1.7V		
30	0V		
31	0V		
32	0V		
33	0V		
34	0V		
35	0.9V		
36	3.3V		
37	1.3V		
38	0.9V		
39	3.3V		
40	3.3V		
41	1.7V		
42	1.7V		
43	1.7V		
44	1.0V		
45	1.7V		
46	2.1V		
47	2.1V		
48	2.1V		
49	2.1V		
50	2.1V		

IC201

NO	DC(V)
1	1.7V
2	1.7V
3	1.7V
4	1.7V
5	1.7V
6	1.7V
7	1.7V
8	0V
9	3.2V
10	5.0V
11	2.5V
12	2.5V
13	2.5V
14	2.5V
15	4.3V
16	4.3V
17	4.3V
18	4.3V
19	9.2V
20	0V
21	0V
22	1.7V
23	1.7V
24	1.7V
25	0V
26	0V
27	1.7V
28	9.2V
29	1.7V
30	9.2V

IC251

NO	DC(V)
1	0.8V
2	0.8V
3	0.8V
4	0.8V
5	0V
6	0V
7	0.8V
8	0V
9	5.0V
10	5.0V
11	5.0V
12	5.0V
13	5.0V
14	5.0V
15	0V
16	0V
17	0V
18	0V
19	5.0V
20	5.0V
21	1.67V
22	1.67V
23	0V
24	3.3V
25	5.0V
26	0V
27	9.2V
28	9.2V
29	0V
30	0V

IC301

NO	DC(V)	NO	DC(V)	NO	DC(V)	NO	DC(V)
1	0V	51	3.3V	101	0.7V	151	0V
2	2.9V	52	3.3V	102	0V	152	1.7V
3	3.3V	53	——	103	1.4V	153	0V
4	0V	54	——	104	2.1V	154	1.7V
5	3.3V	55	——	105	——	155	0V
6	3.3V	56	——	106	1.7V	156	3.3V
7	——	57	3.3V	107	0.7V	157	0V
8	0V	58	1.7V	108	0.7V	158	0V
9	0V	59	0V	109	3.3V	159	0V
10	0V	60	0V	110	1.7V	160	0V
11	3.3V	61	——	111	1.7V	161	0V
12	3.3V	62	——	112	0V	162	3.3V
13	3.3V	63	——	113	0V	163	0V
14	0V	64	——	114	1.7V	164	0V
15	1.4V	65	1.7V	115	1.7V	165	0V
16	0.3V	66	1.7V	116	3.3V	166	0V
17	1.4V	67	1.7V	117	1.7V	167	0V
18	1.7V	68	1.7V	118	1.7V	168	0V
19	0V	69	3.3V	119	1.7V	169	3.3V
20	1.7V	70	——	120	1.7V	170	0V
21	0V	71	——	121	2.1V	171	0V
22	2.2V	72	——	122	1.7V	172	3.3V
23	2.2V	73	——	123	2.1V	173	0V
24	1.7V	74	——	124	——	174	4.9V
25	1.5V	75	——	125	3.3V	175	4.9V
26	1.5V	76	1.7V	126	0V	176	3.3V
27	1.5V	77	0V	127	0V		
28	1.5V	78	3.3V	128	0V		
29	1.5V	79	1.7V	129	0V		
30	0.5V	80	——	130	0V		
31	3.3V	81	0V	131	3.3V		
32	0V	82	0.8V	132	0V		
33	3.3V	83	2.1V	133	0V		
34	3.3V	84	1.7V	134	0V		
35	3.3V	85	0V	135	0V		
36	3.3V	86	——	136	1.7V		
37	0V	87	——	137	3.3V		
38	0V	88	3.3V	138	0V		
39	0V	89	0V	139	3.3V		
40	0V	90	1.7V	140	0V		
41	0V	91	——	141	0V		
42	0V	92	——	142	0V		
43	1.0V	93	1.7V	143	3.3V		
44	0V	94	0V	144	0V		
45	——	95	——	145	——		
46	0V	96	1.7V	146	1.7V		
47	3.3V	97	1.7V	147	3.3V		
48	0V	98	——	148	——		
49	——	99	3.3V	149	0V		
50	——	100	0.7V	150	0V		

IC401

NO	DC(V)	NO	DC(V)
1	3.3V	51	——
2	3.3V	52	0V
3	0V	53	3.3V
4	3.3V	54	3.3V
5	——	55	3.3V
6	3.3V	56	3.3V
7	——	57	——
8	0V	58	3.3V
9	3.3V	59	0V
10	0V	60	——
11	3.3V	61	0V
12	3.3V	62	0V
13	1.5V	63	0V
14	1.5V	64	0V
15	1.5V	65	0V
16	1.5V	66	3.3V
17	3.3V	67	3.3V
18	——	68	0V
19	0V	69	3.3V
20	0V	70	3.3V
21	——	71	0V
22	3.3V	72	3.3V
23	1.7V	73	3.3V
24	1.7V	74	3.3V
25	5.0V	75	3.3V
26	3.3V	76	3.3V
27	0V	77	0V
28	3.3V	78	0V
29	3.3V	79	0V
30	3.3V	80	0V
31	3.3V	81	3.3V
32	0V	82	3.3V
33	3.3V	83	3.3V
34	3.3V	84	3.3V
35	0V	85	3.3V
36	3.3V	86	3.3V
37	3.3V	87	3.3V
38	3.3V	88	3.3V
39	0V	89	3.3V
40	0V	90	3.3V
41	——	91	3.3V
42	——	92	0V
43	0V	93	0V
44	——	94	0V
45	3.3V	95	0V
46	0V	96	0V
47	0V	97	0V
48	3.3V	98	0V
49	3.3V	99	0V
50	3.3V	100	0V

IC451

NO	DC(V)
1	0V
2	3.2V
3	0V
4	0V
5	0V
6	0V
7	0V
8	0V

IC501

NO	DC(V)	NO	DC(V)	NO	DC(V)	NO	DC(V)	NO	DC(V)
1	3.2V	53	3.2V	105	0V	157	0V	209	0V
2	0.5V	54	0.4V	106	0V	158	0V	210	3.2V
3	0.4V	55	0.4V	107	3.2V	159	1.7V	211	0V
4	1.8V	56	0.4V	108	1.7V	160	1.7V	212	1.7V
5	0.4V	57	0V	109	0V	161	3.2V	213	3.2V
6	0V	58	0.4V	110	0V	162	0V	214	3.2V
7	0.4V	59	0.4V	111	1.0V	163	0V	215	0V
8	0.4V	60	0.4V	112	1.0V	164	0V	216	0V
9	0V	61	0.5V	113	3.1V	165	0V	217	3.2V
10	3.2V	62	3.2V	114	0.4V	166	0V	218	0V
11	0V	63	0.5V	115	0.4V	167	0V	219	3.2V
12	0V	64	3.2V	116	——	168	0V	220	3.2V
13	0V	65	1.0V	117	3.1V	169	3.2V	221	0V
14	0V	66	——	118	0.8V	170	3.2V	222	3.2V
15	2.0V	67	0V	119	1.3V	171	0V	223	3.2V
16	1.3V	68	1.7V	120	1.8V	172	0V	224	3.2V
17	0V	69	0V	121	0V	173	0V	225	0V
18	0.4V	70	3.2V	122	0V	174	0V	226	0V
19	3.2V	71	0V	123	0V	175	0V	227	0.8V
20	1.4V	72	0V	124	0V	176	0V	228	0V
21	1.7V	73	0V	125	3.2V	177	0V	229	0.8V
22	1.7V	74	0V	126	0V	178	0V	230	0V
23	0V	75	3.2V	127	0V	179	0V	231	0.8V
24	3.2V	76	——	128	0V	180	0V	232	0.6V
25	0.5V	77	1.7V	129	0V	181	3.2V	233	3.2V
26	2.5V	78	1.7V	130	0V	182	3.2V	234	0.6V
27	3.2V	79	1.7V	131	0V	183	0V	235	0.8V
28	1.2V	80	0V	132	0V	184	0V	236	1.0V
29	0V	81	0V	133	0V	185	3.2V	237	0V
30	0V	82	0V	134	0V	186	0V	238	0.4V
31	0V	83	3.2V	135	1.8V	187	0V	239	0.8V
32	2.0V	84	0.4V	136	0V	188	0V	240	0.8V
33	1.3V	85	0V	137	0V	189	3.2V		
34	1.7V	86	3.2V	138	0V	190	0V		
35	2.2V	87	0V	139	0V	191	0V		
36	3.1V	88	1.7V	140	3.2V	192	1.7V		
37	3.2V	89	0V	141	0V	193	3.2V		
38	0V	90	0V	142	0V	194	3.2V		
39	3.2V	91	1.2V	143	0V	195	0V		
40	0V	92	0V	144	0V	196	3.2V		
41	0V	93	0V	145	3.2V	197	3.2V		
42	0V	94	0.6V	146	0V	198	3.2V		
43	0.7V	95	0V	147	0V	199	3.2V		
44	3.2V	96	0V	148	0V	200	3.2V		
45	0.7V	97	0V	149	0V	201	0V		
46	0.5V	98	1.7V	150	0V	202	3.2V		
47	0V	99	——	151	0V	203	3.2V		
48	0.5V	100	——	152	0V	204	0V		
49	0V	101	1.7V	153	0V	205	4.9V		
50	0.4V	102	3.2V	154	3.2V	206	3.2V		
51	0.4V	103	0V	155	0V	207	0V		
52	0.4V	104	0V	156	3.2V	208	3.2V		

IC502

NO	DC(V)
1	1.5V
2	3.3V
3	1.7V
4	0V
5	1.7V
6	1.7V
7	1.7V
8	1.7V

IC505

NO	DC(V)	NO	DC(V)
1	3.2V	51	0.5V
2	0.8V	52	0V
3	3.2V	53	0.5V
4	0.8V	54	0.7V
5	0.8V	55	3.2V
6	0V	56	0.7V
7	0.6V	57	0.6V
8	0.6V	58	0V
9	3.2V	59	0V
10	0.8V	60	1.7V
11	1.0V	61	1.4V
12	0V	62	0.4V
13	0.4V	63	1.3V
14	——	64	1.3V
15	3.2V	65	2.0V
16	0V	66	0V
17	3.2V	67	3.2V
18	0V	68	1.7V
19	3.2V	69	——
20	2.2V	70	——
21	——	71	0V
22	2.0V	72	0V
23	1.3V	73	——
24	0V	74	0V
25	1.2V	75	3.2V
26	2.5V	76	0.4V
27	0.5V	77	0.4V
28	1.0V	78	0V
29	3.2V	79	0V
30	——	80	0.4V
31	0.4V	81	3.2V
32	0V	82	0.5V
33	0.4V	83	0.8V
34	0.4V	84	0V
35	3.2V	85	0.8V
36	0.4V	86	0V
37	0.4V	87	
38	0V	88	
39	0.5V	89	
40	0.5V	90	
41	3.2V	91	
42	3.2V	92	
43	3.2V	93	
44	0V	94	
45	0.4V	95	
46	0V	96	
47	0.4V	97	
48	0.4V	98	
49	3.2V	99	
50	0.4V	100	

IC509

NO	DC(V)
1	0V
2	0V
3	0V
4	0V
5	0V
6	0V
7	0V
8	0V
9	0V
10	——
11	3.2V
12	0V
13	——
14	——
15	0V
16	0V
17	0V
18	0V
19	0V
20	0V
21	0V
22	0V
23	0V
24	3.2V
25	0V
26	3.2V
27	0V
28	3.2V
29	0V
30	0V
31	0V
32	0V
33	0V
34	0V
35	0V
36	0V
37	3.2V
38	0V
39	0V
40	0V
41	0V
42	0V
43	0V
44	0V
45	0V
46	0V
47	0V
48	0V

IC510

NO	DC(V)
1	0V
2	3.2V
3	0V
4	3.2V
5	3.2V
6	3.2V
7	0V
8	0V

IC511

NO	DC(V)
1	0V
2	1.8V
3	3.2V

IC512

NO	DC(V)
1	0V
2	0V
3	0V
4	0V
5	0V
6	0V
7	0V
8	0V
9	0V
10	0V
11	0V
12	0V
13	0V
14	0V
15	0V
16	0V
17	0V
18	0V
19	0V
20	3.2V

IC513

NO	DC(V)
1	0V
2	0V
3	0V
4	0V
5	0V
6	0V
7	0V
8	0V
9	0V
10	0V
11	0V
12	0V
13	0V
14	0V
15	0V
16	0V
17	0V
18	0V
19	0V
20	3.2V

IC521

NO	DC(V)
1	3.2V
2	0V
3	5.0V
4	3.2V
5	0V
6	5.0V
7	0V
8	5.0V
9	0V
10	3.2V
11	5.0V
12	0V
13	3.2V
14	5.0V

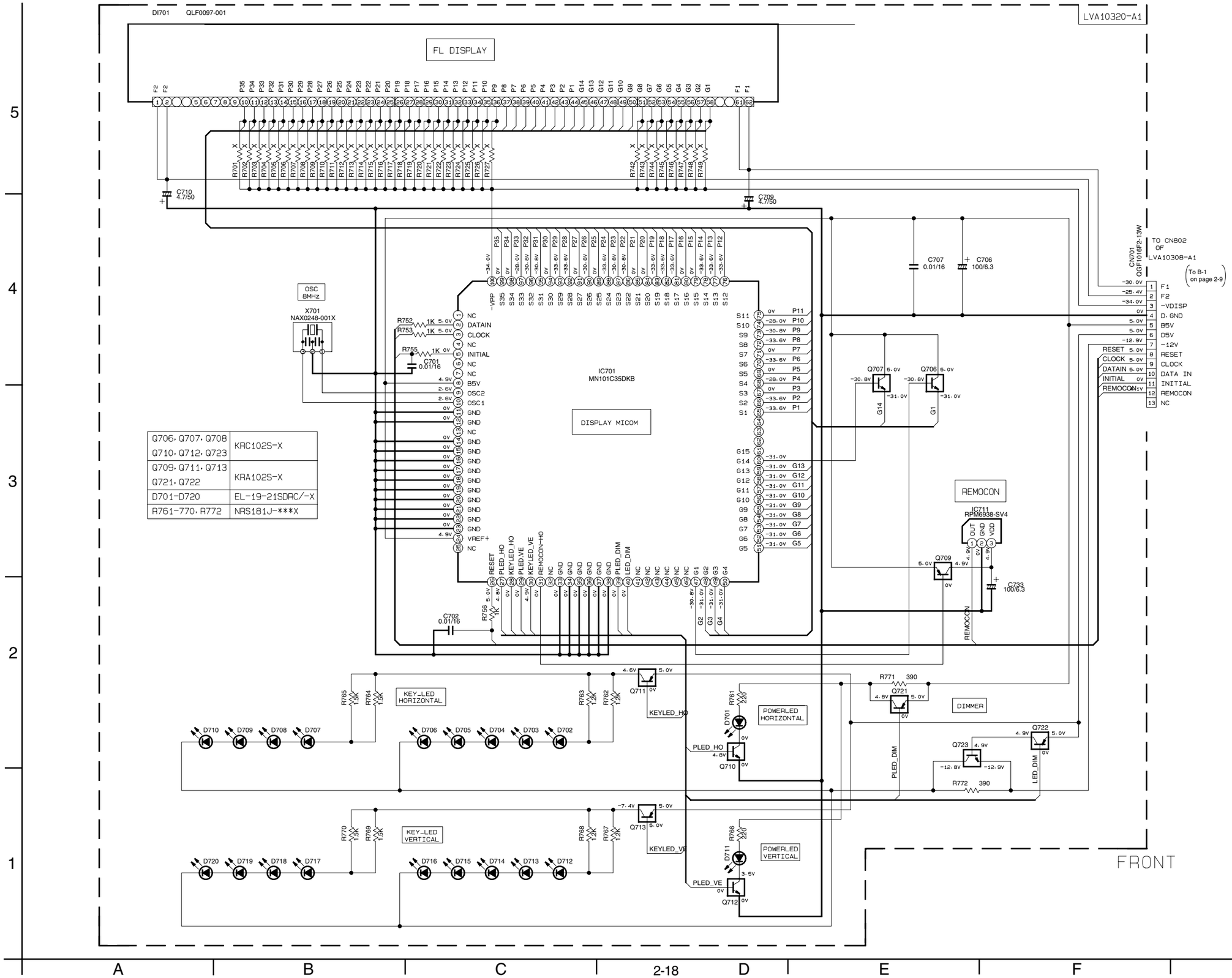
IC522

NO	DC(V)
1	3.2V
2	3.2V
3	3.2V
4	3.2V
5	3.2V
6	3.2V
7	0V
8	0V
9	3.2V
10	3.2V
11	3.2V
12	0V
13	5.0V
14	3.2V

NOTES

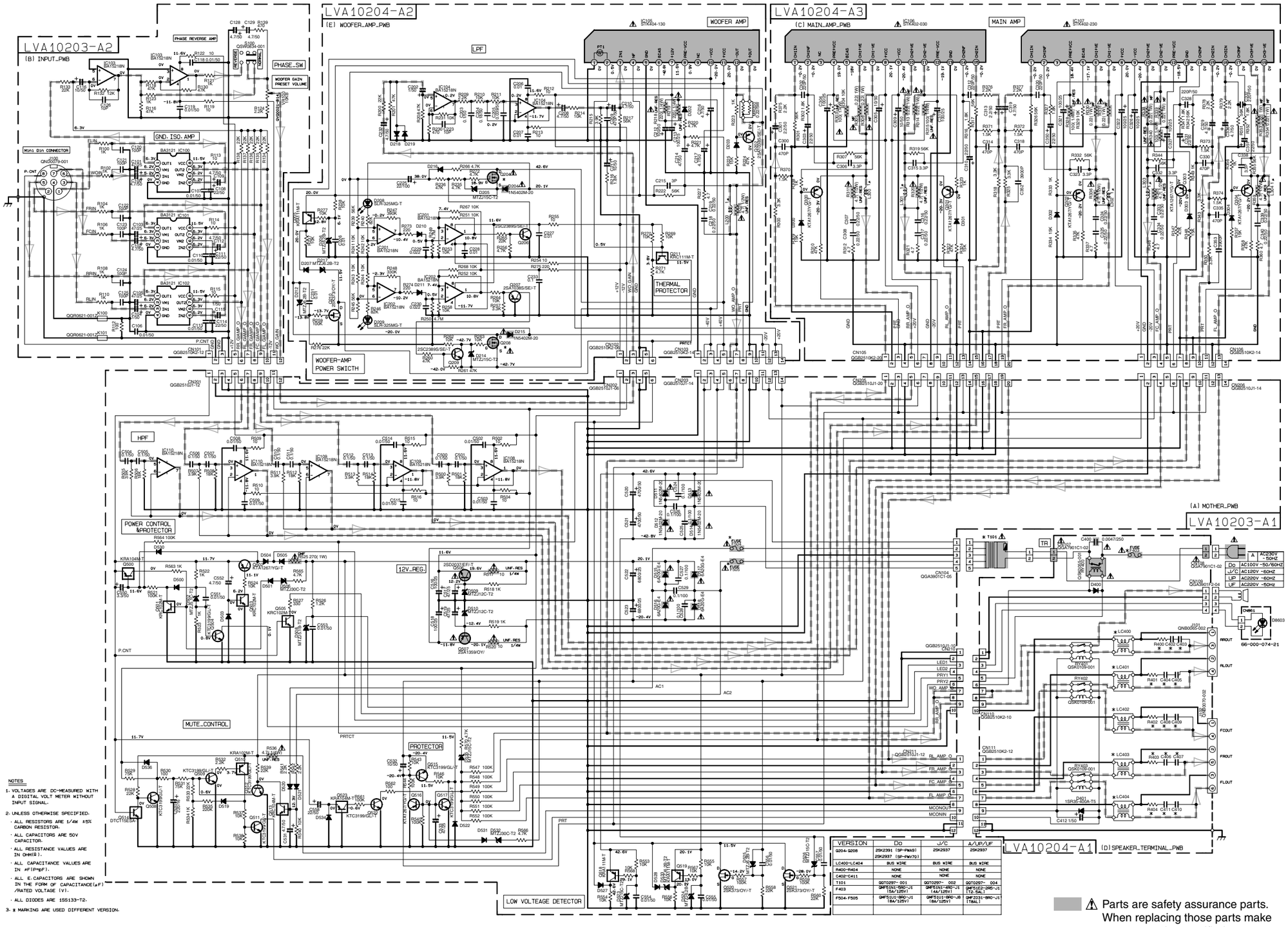
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL. ——
CONDITION --- POWER ON DVD STOP

■ FL display section



<Speaker section>

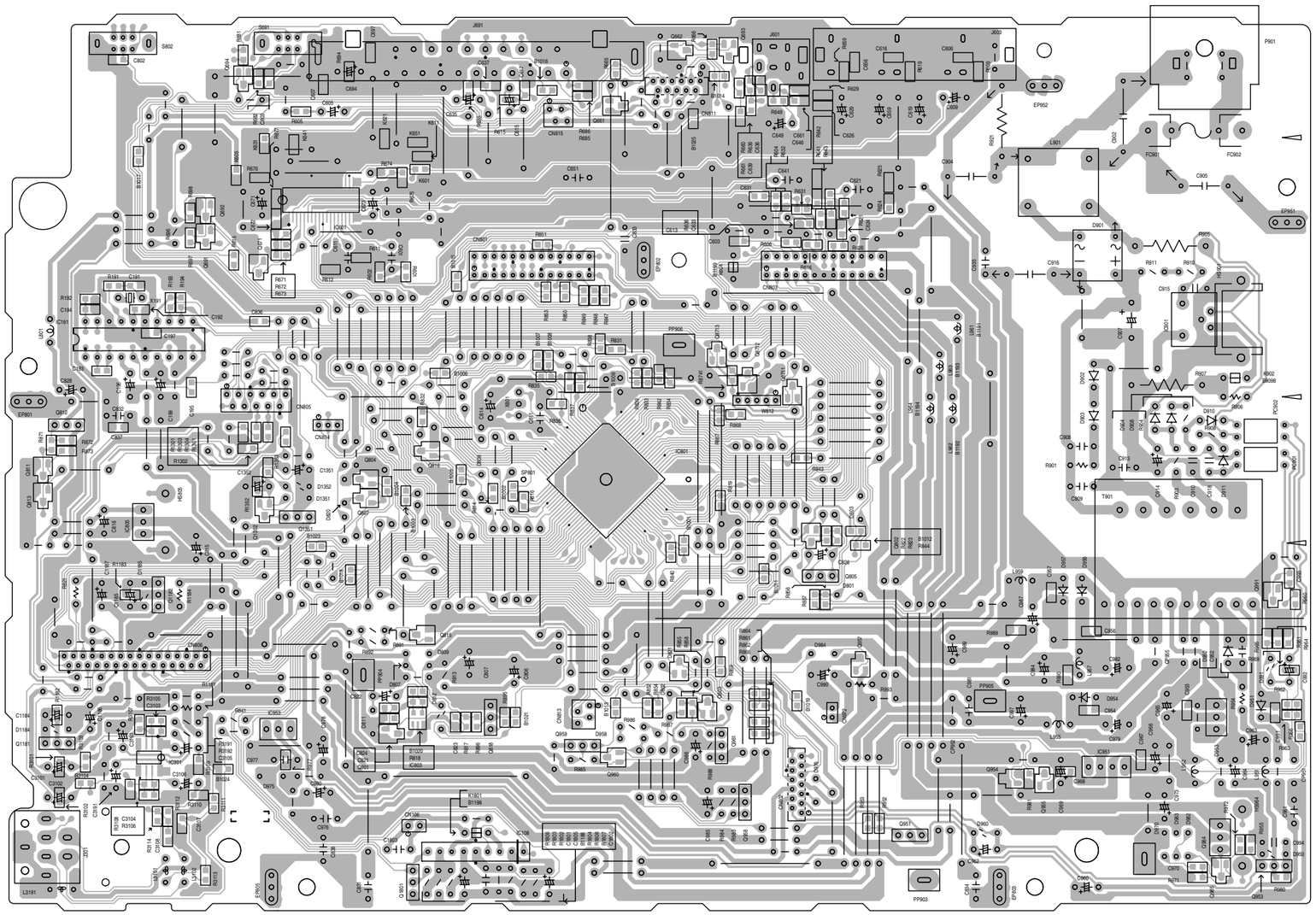
■ Powered subwoofer section



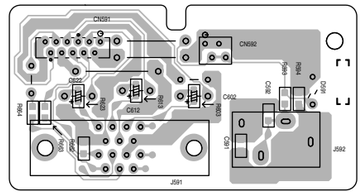
Printed circuit board

<Main body section>

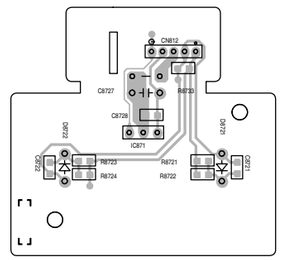
■ Main board



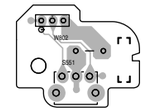
(Main board)



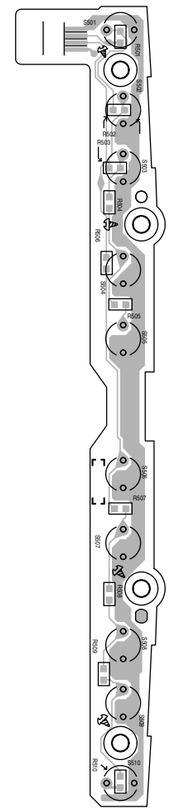
(Compulink board)



(LED board)



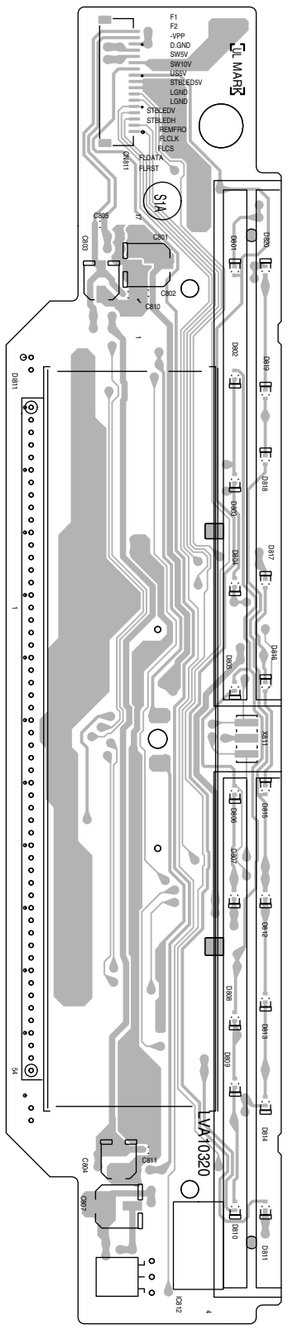
(Open/Close board)



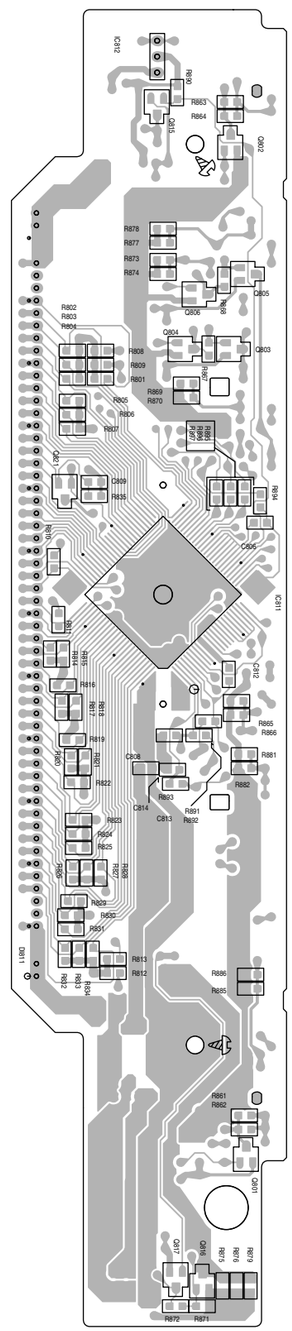
(Switch board)

■ FL display board

Forward side

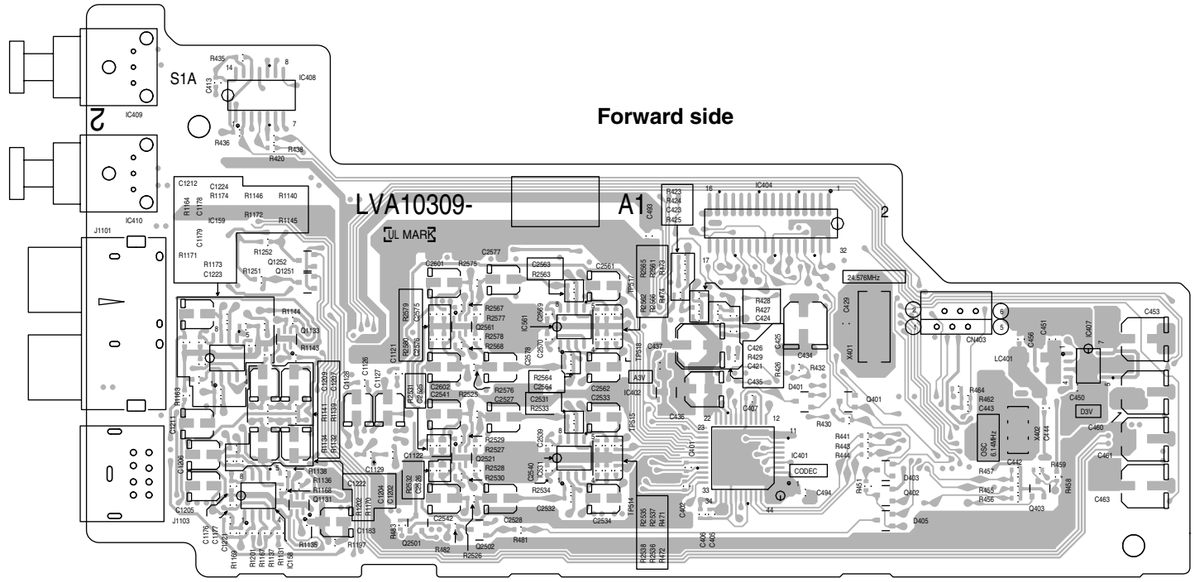


Reverse side

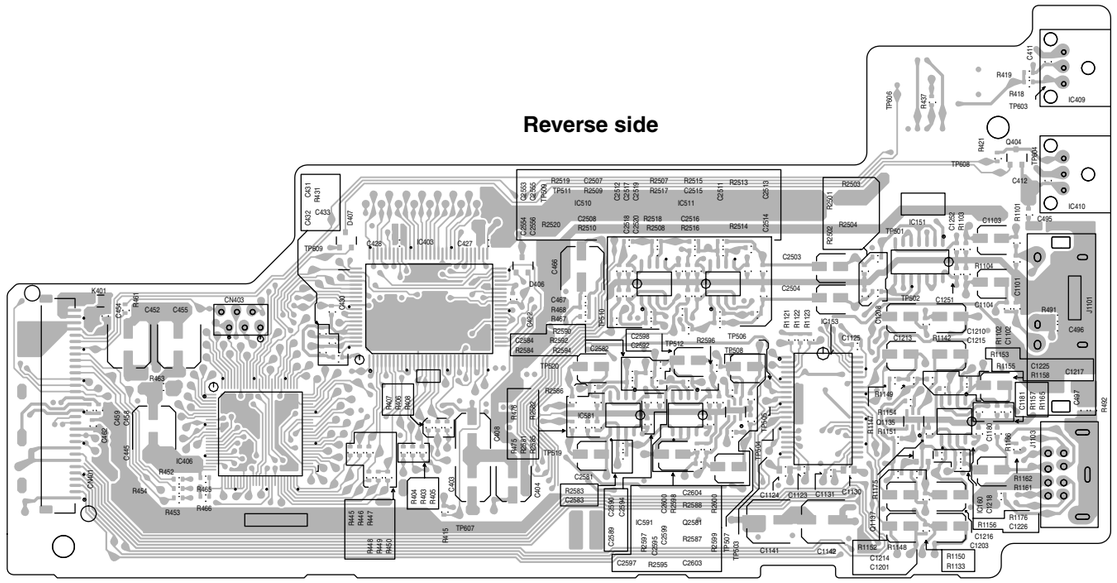


■ DSP/Audio board

Forward side

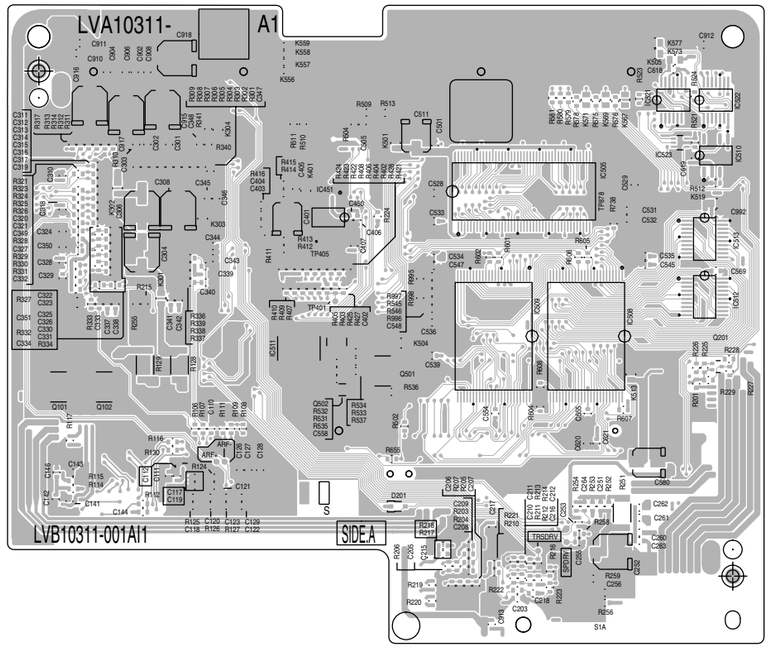


Reverse side

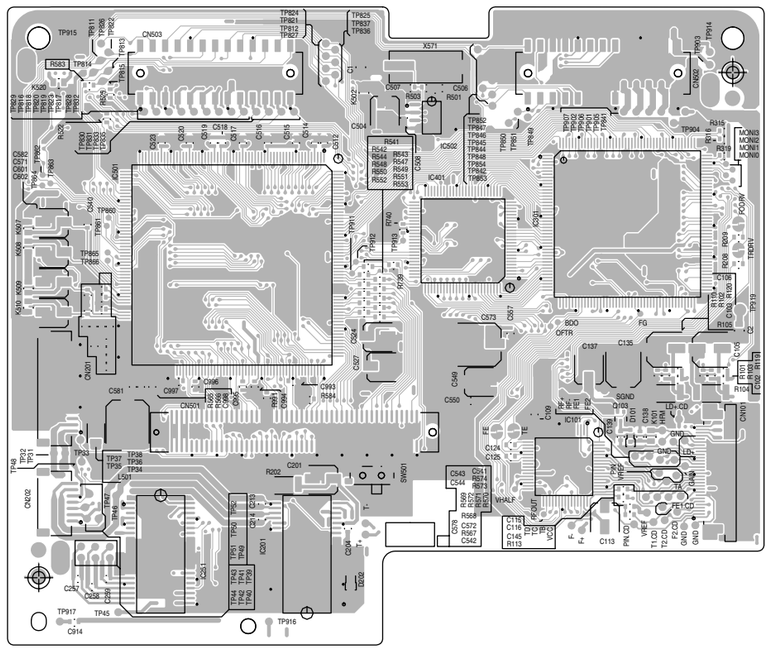


■ DVD servo board

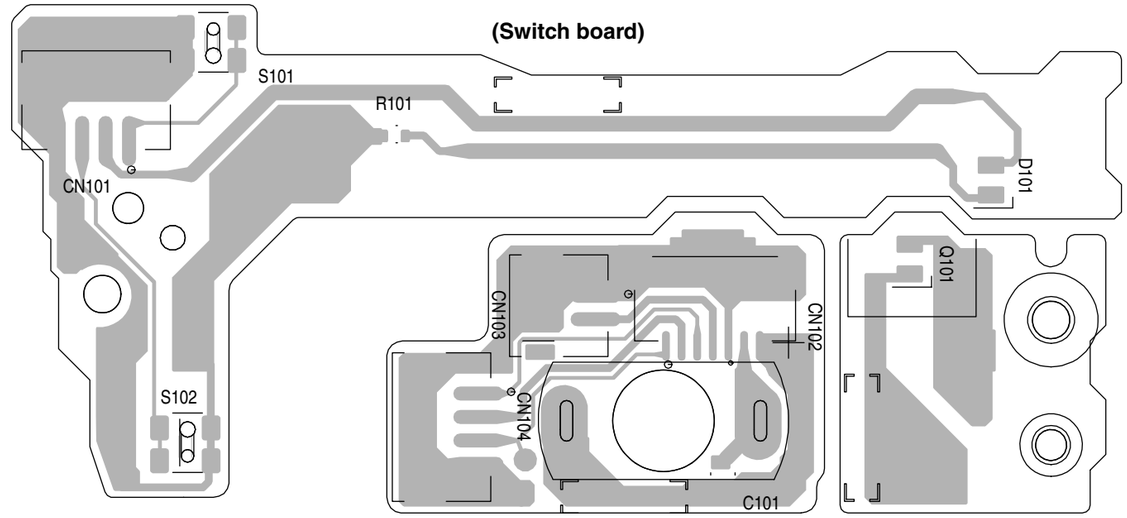
Forward side



Reverse side

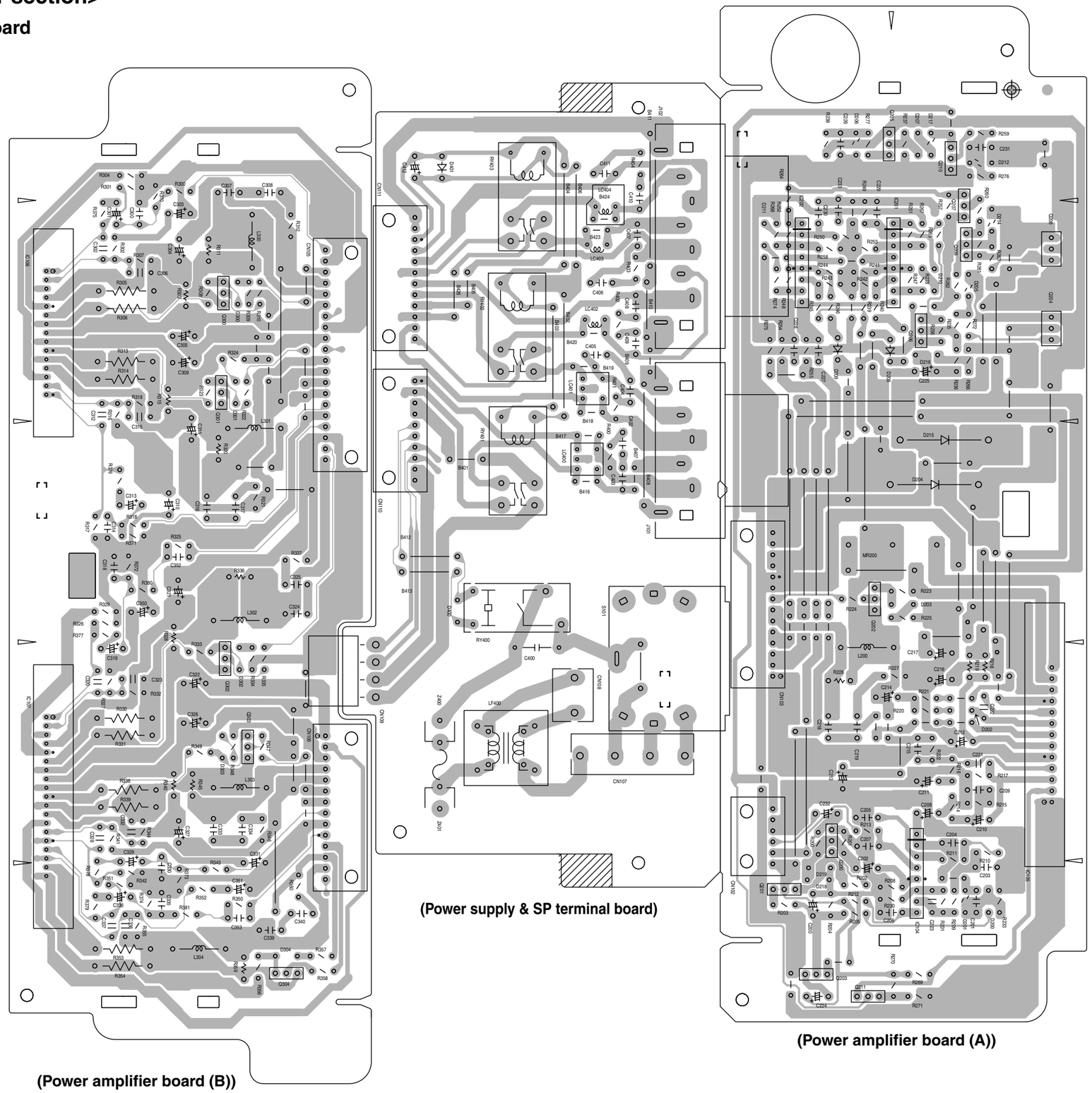


■ DVD loading board



<Speaker section>

■ Main board



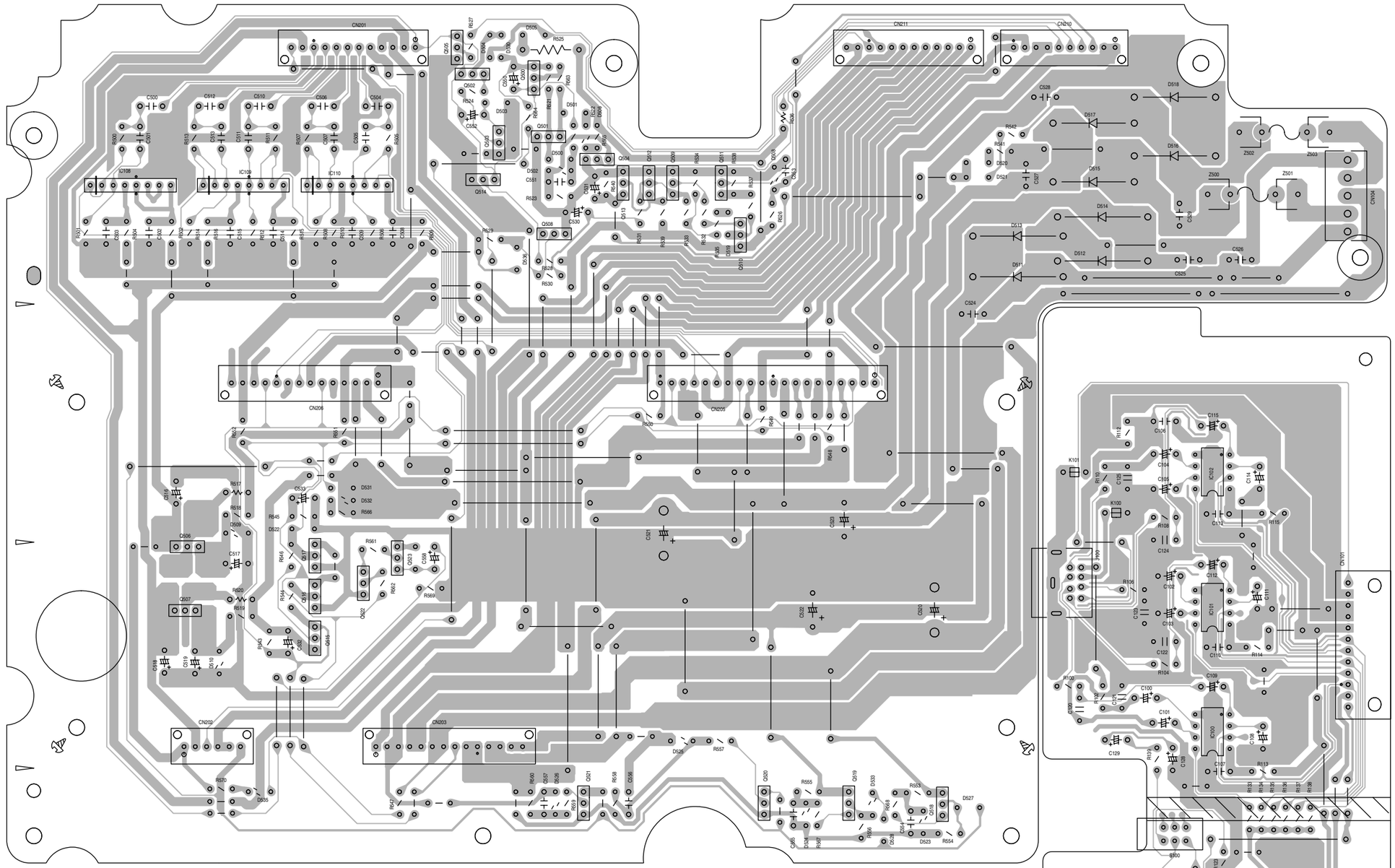
(Power amplifier board (B))

(Power supply & SP terminal board)

(Power amplifier board (A))

■ Sub board

(Mother board)



(Pre-amplifier board)

< MEMO >

PARTS LIST

[TH-V70]

* All printed circuit boards and its assemblies are not available as service parts.

Area suffix

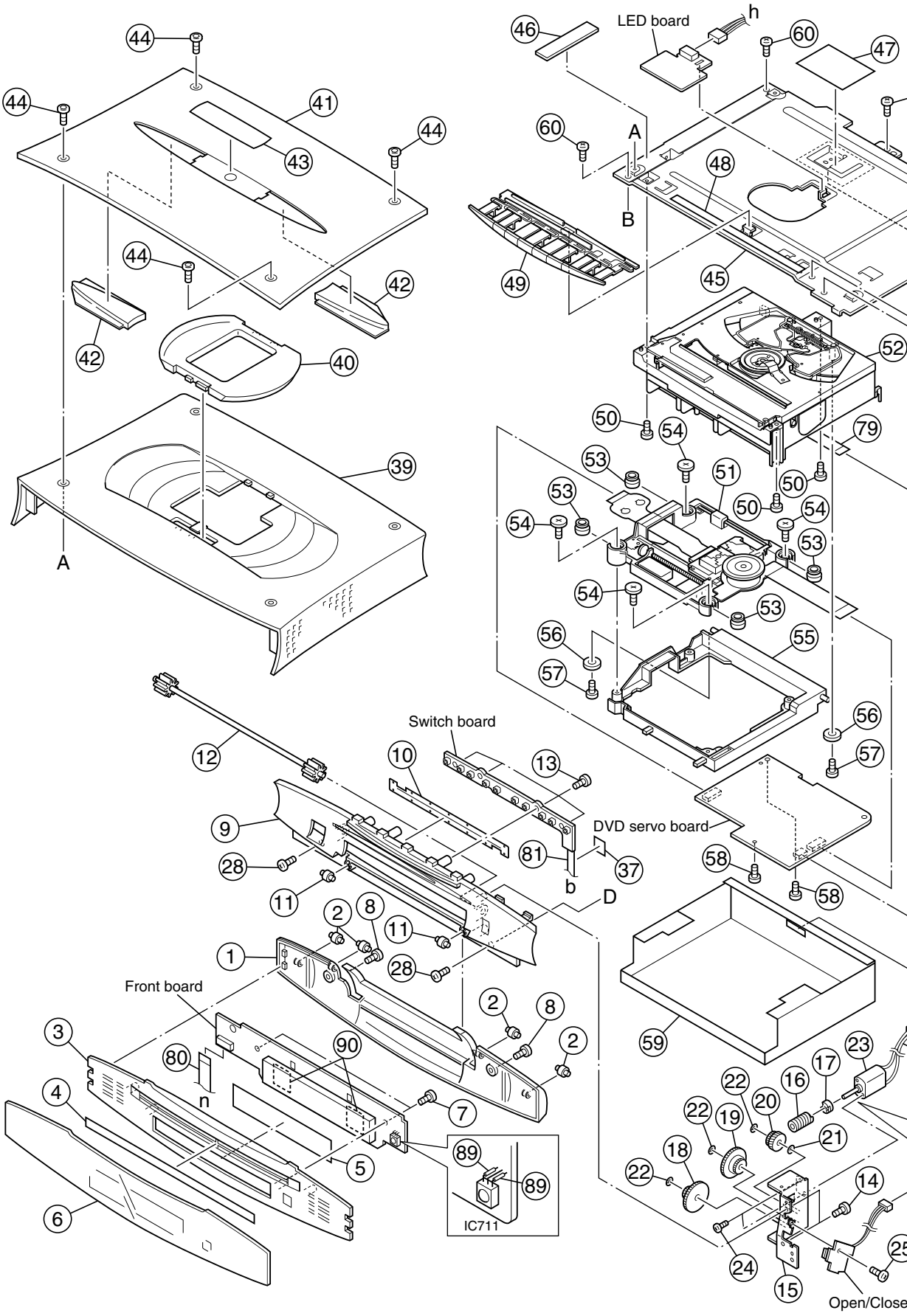
J ---------- U.S.A.
C ---------- Canada

- Contents -

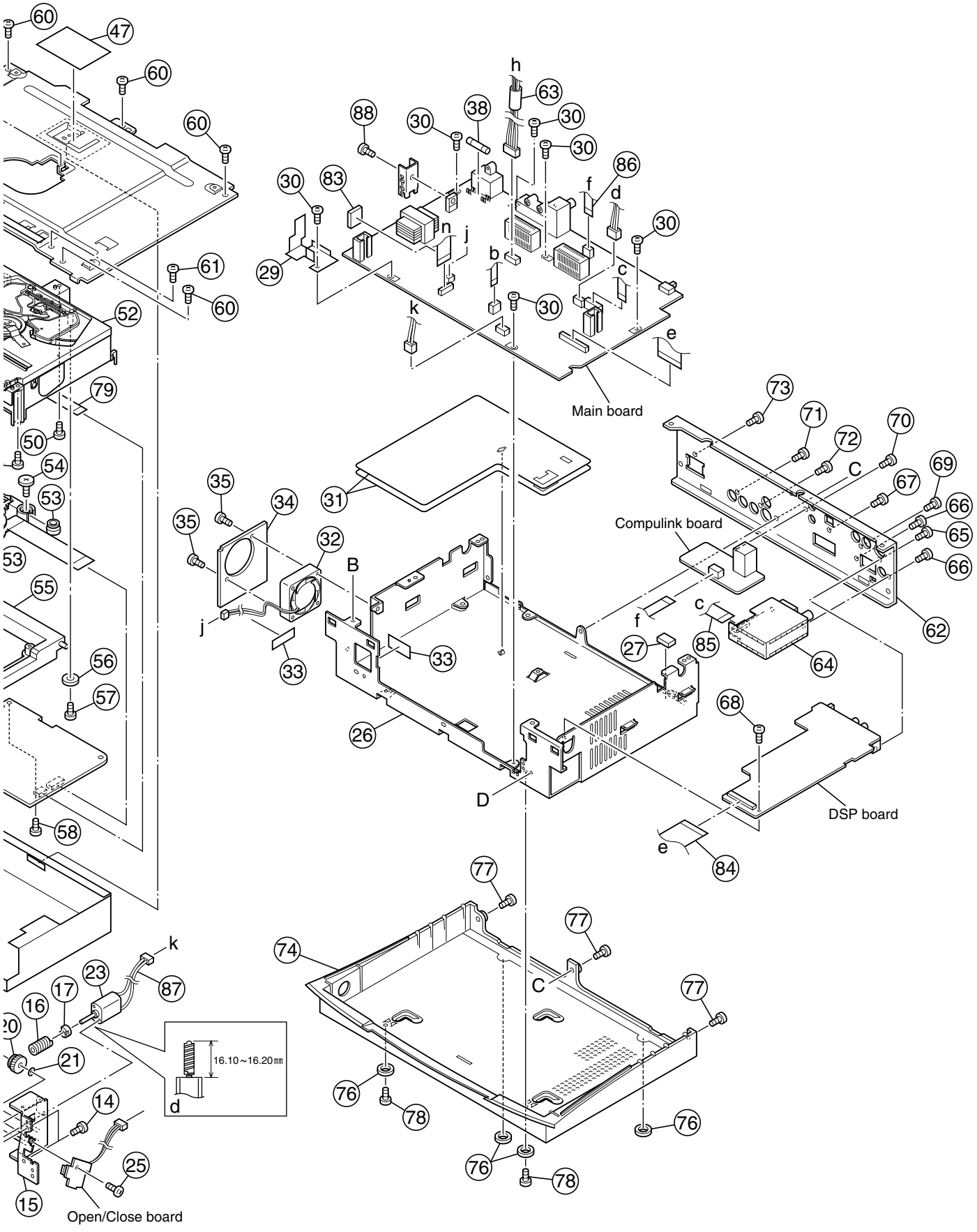
Exploded view of general assembly and parts list (Block No.M1) ---------- 3- 2
DVD mechanism assembly and parts list (Block No.MJ) ---------- 3- 6
DVD loading base assembly and parts list (Block No.KN) ---------- 3- 8
Exploded view of general assembly and parts list(SP-THV70) (Block No.M2) --- 3-10
Electrical parts list (Block No.01~07) ---------- 3-12
Packing materials and accessories parts list (Block No.M3,M5) ---------- 3-27

Exploded view of general assembly and parts list

Block No. M 1 M M



M M


Main board
Compulink board
DSP board
Open/Close board
16.10~16.20mm
d

■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	GV10091-004	MOVING BASE	1	PS/PAINT	
	2	GV40269-001A	ROLLER	4		
	3	GV10092-001A	MOVING PANEL	1	PS/PAINT	
	4	GV40334-001A	SHEET	1		
	5	GV40356-001A	WINE RED SHEET	1	FOR FL TUBE COL	
	6	GV30238-013A	FRONT LENS	1	WITH WINE-RED S	
	7	QYSBSF2608Z	T.SCREW	2	FL PWB	
	8	QYSBSF2608Z	T.SCREW	2	M.PANEL+M.BASE	
	9	GV10090-013A	FRONT BASE	1	PS/PAINT	
	10	GV30235-002A	FELT	1	NO SCRATCH TO DISK	
	11	GV40269-001A	ROLLER	2	FRONT BASE	
	12	GV30308-002A	ROD GEAR ASS'Y	1	ROD + GEAR2	
	13	QYSBSF2608Z	T.SCREW	4	SW PWB	
	14	QYSBSF2608Z	T.SCREW	2	M BKT ASY+F.BASE	
	15	GV30237-002A	MOTOR BKT ASSY	1	FOR FL	
	16	GV40265-001A	WORM GEAR	1	MADE IN MALAYSIA	
	17	GV40266-001A	ROTOR	1		
	18	GV40267-002A	GEAR 1	1		
	19	GV40338-001A	GEAR 2	1		
	20	LV30981-005A	CLUTCH ASS'Y	1		
	21	QYWFL266010-9	WASHER	1	CLUTCH	
	22	WDM214540	WASHER	3	GEAR/CLUTCH	
	23	QAR0220-001	DC MOTOR	1		
	24	QYSPSPT2020Z	MINI SCREW	2	DC MOTOR+M.BKT	
	25	QYSBST2604Z	T.SCREW	1	OPEN/CLOSE PWB	
	26	LV10643-001A	BOTTOM CHASSIS	1	SECC-P T1.0	
	27	LV30225-0F7A	SPACER	1		
	28	QYSBSG3008Z	T.SCREW	2	BOTTOM+F.BASE	
	29	LV43075-001A	WIRE HOLDER	1		
	30	QYSBSG3006Z	T.SCREW	6	BOTTOM+MAIN PWB	
	31	LV33595-001A	BARRIER	2	PRIMARY&15 WATT	
	32	QAR0148-001	FAN MOTOR	1	WIRE 80-10	
	33	LV30225-0F6A	SPACER	2		
	34	GV40354-002A	FAN COVER	1	FOR FAN MOTOR	
	35	QYSBSGG3014Z	SCREW	2	FAN+B.CHASSIS	
	37	E3400-431	SPACER	1	FOR E-CARD WIRE	
⚠	38	QMF51U1-1R6-J8	FUSE	1	F 901	
	39	GV10096-008A	TOP PANEL	1	PS/PAINT	
	40	GV30245-001A	LIGHT LENS	1	PMMA	
	41	LV10644-001A	TOP PLATE	1		
	42	LV33317-001A	TOP LENS	2	PMMA/SILK X1	
	43	LV33318-005A	TOP ORNAMENT	1		
	44	LV42860-001A	SPECIAL SCREW1	4	TOP PLATE+T.CHASSIS	
	45	GV10095-002A	TOP CHASSIS	1	SECC-P T0.8	
	46	GV40333-001A	SPACER	1		
	47	GV40330-001A	SPACER	1	STICK ON TOP CHASSIS	
	48	GV30349-002A	SPACER	1	STICK ON T.CHASSIS	
	49	GV20159-001A	PUSH BUTTON	1	ABS/PLATING	

■ Parts list (General assembly)

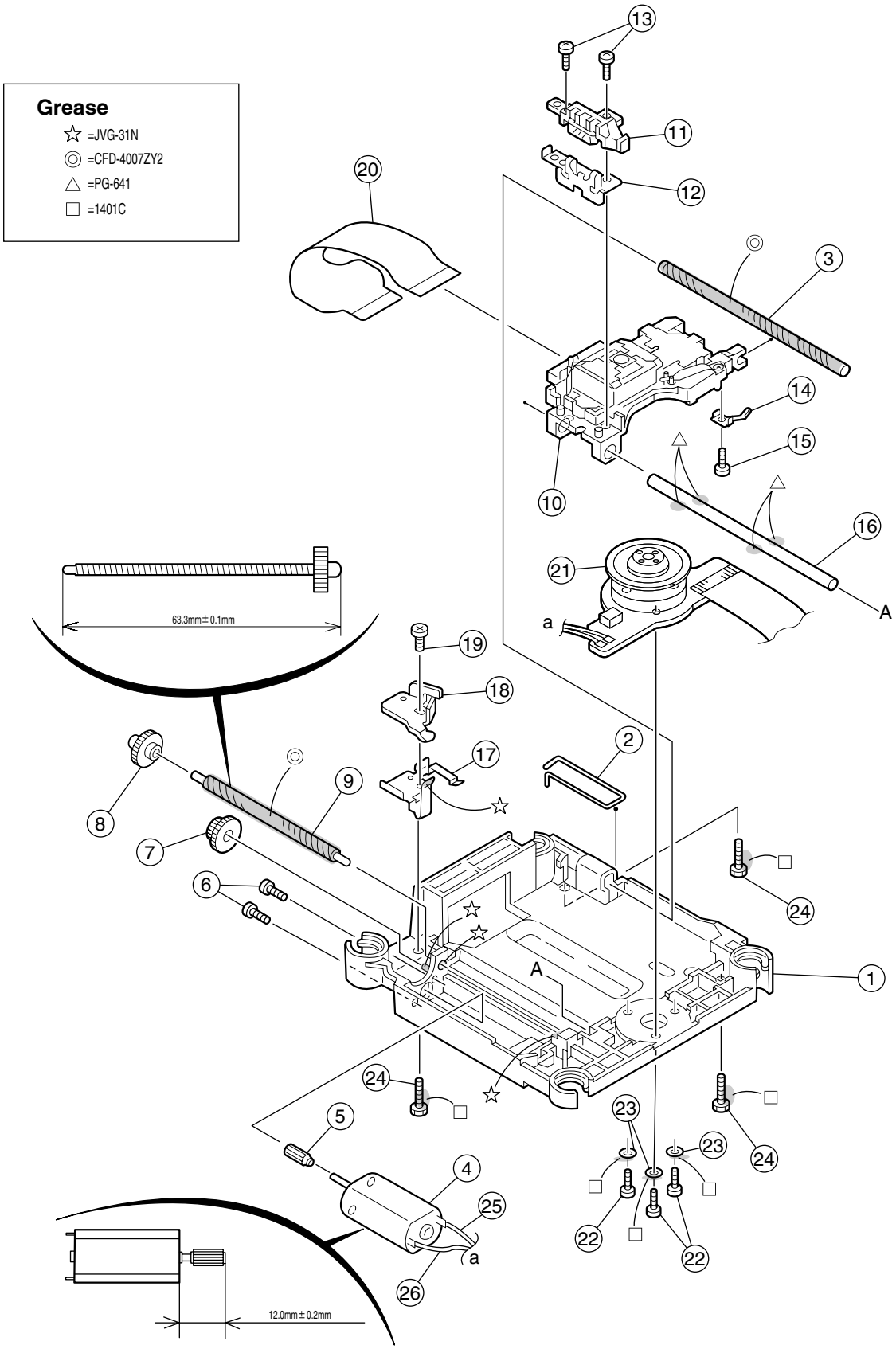
Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	50	QYSBSG3008Z	T.SCREW	3	MECHA+TOP CHASSIS	
	51	----------	DVD MECHA	1		
	52	----------	DVD LOADING BASE	1		
	53	LV43132-001A	INSULATOR	4	OUTER&INNER GREEN	
	54	LE40860-001A	S. SCREW	4		
	55	LV21207-006A	DVD ELEVATOR	1		
	56	VKZ4563-006	O-RING	2	FOR DVD ELEVATOR	
	57	GV40133-001A	SPECIAL SCREW	2		
	58	QYSBSF2006Z	SCREW	2	DVD M.PWB + LOADER	
	59	LV21296-001A	PROTECTOR	1	FOR DVD SLOT MECHA	
	60	QYSSST3006Z	SCREW	5	T.CHAS.+B.CHAS4+R.PANE1	
	61	QYSBST3006Z	T.SCREW	1	T.CHASSIS+MOTOR	
	62	LV21195-001A	REAR PANEL	1	SECC-P/SILKX1	
	63	GV40329-001A	SPACER	1	ROLL MAIN-TOP WIRE	
	64	QAU0279-001	TUNER	1		
	65	QYSBSP3006M	SCREW	1	SYSTEM	
	66	QYSBST3006M	T.SCREW	2	FOR TUNER PACK	
	67	QYSBSGY3008M	SPECIAL SCREW	1	OPT IN	
	68	QYSBSG3006Z	T.SCREW	1	DSP PWB+BOTT.CHASSIS	
	69	QYSBSGY3008M	SPECIAL SCREW	1	AUX IN	
	70	QYSBSGY3008M	SPECIAL SCREW	1	AV COMPULINK	
	71	QYSBSGY3008M	SPECIAL SCREW	1	COMPONENT	
	72	QYSBSGY3008M	SPECIAL SCREW	1	S VIDEO	
	73	QYSBSGY3008M	SPECIAL SCREW	1	AC IN	
	74	GV10094-014A	BOTTOM PANEL	1	PS/PAINT	
	76	GV40270-001A	FOOT	4	BOTTOM PANEL	
	77	QYSBSG3008M	T.SCREW	3	R.PANEL+B.PANEL	
	78	QYSBSG3008M	T.SCREW	2	B.CHA+B.PANEL	
	79	QUQ210-0707DF	FFC WIRE	1	M.PCB TO DVD MECHA	
	80	QUQ110-1318AJ	FFC WIRE	1	CN802 TO CN701	
	81	WJT0081-001A	FFC WIRE	1		
	83	E3400-431	SPACER	1	FOR E-CARD WIRE	
	84	QUQ210-3110CJ	FFC WIRE	1	CN806 TO CN401	
	85	QUQ412-1108CJ	FFC WIRE	1	CN805 TO TUNER	
	86	QUQ412-0406CJ	FFC WIRE	1	CN815 TO CN592	
	87	WJM0133-001A	E-SI C WIRE C-F	1	MOTOR TO CN106	
	88	QYSBSE3008Z	SCREW	1	FOR IC901+HS901	
	89	QWTA100-005	UL VINYL TUBE	2	FOR REMOCON SENSOR	
	90	GV40268-002A	SPACER	2	TOTAL THICKNESS	

DVD mechanism assembly and parts list

Block No. M J M M

EXL-V9-1YPC



■ Parts list (DVD mechanism)

Block No. MJMM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	LE10269-001A	MECHA.BASE	1		
	2	LE40857-001A	BAR SPRING	1		
	3	LV41121-002A	SHAFT	1		
	4	QAR0215-001	FEED MOTOR	1		
	5	LV41510-001A	FEED GEAR T	1		
	6	QYSPSPU2040M	SCREW	2		
	7	LE40854-002A	FEED GEAR M	1		
	8	LE40855-001A	FEED GEAR E	1		
	9	LV41517-003A	LEAD SCREW	1		
	10	QAL0342-001	PICK UP	1		
	11	LE20624-003A	SW.ACTUATOR	1		
	12	LE31011-001A	LEAD SPRING	1		
	13	QYSPSFU1740Z	SCREW	2		
	14	LE31012-001A	P.U.SPRING	1		
	15	QYSPSGU1430Z	SCREW	1		
	16	LV41121-002A	SHAFT	1		
	17	LE31009-001A	T.SPRING	1		
	18	LE31010-001A	BRACKET	1		
	19	QYSDSF2005Z	SCREW	1		
	20	QAL0405-001	FPC	1		
	21	QAR0213-001	SPINDLE MOTOR	1		
	22	QYSPSPU1740Z	SCREW	3		
	23	QYWSS183803Z	WASHER	3		
	24	LE40858-002A	S.SCREW	3		
	25	QUB549-05A1A1	LUG WIRE	1		
	26	QUB549-05A1A1	LUG WIRE	1		

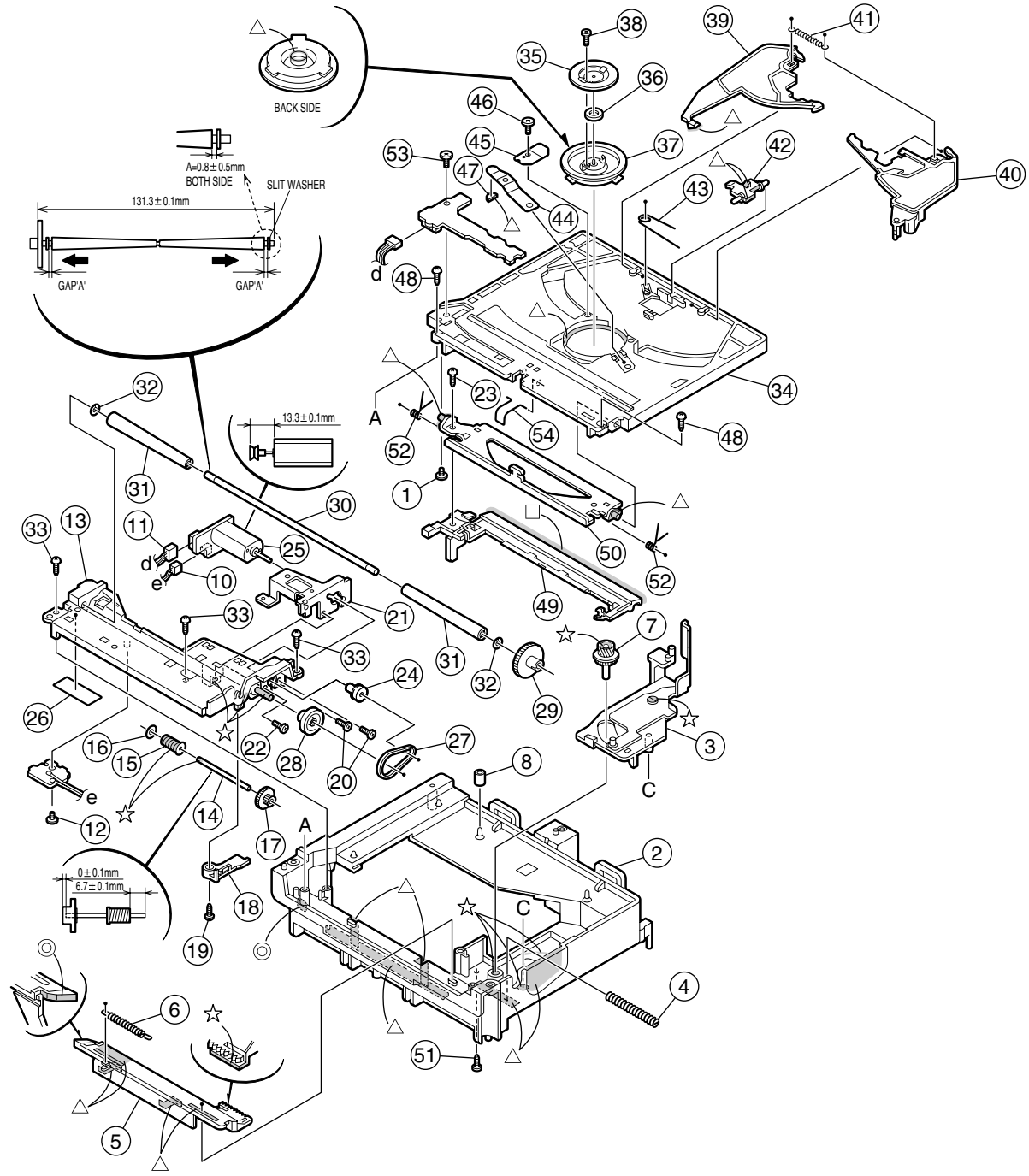
DVD loading base assembly and parts list

Block No. M N M M

FLM-FD1-1M

Grease

☆ =JVG-31N
◎ =JC-803B
△ =JVS-1003
□ =RX405



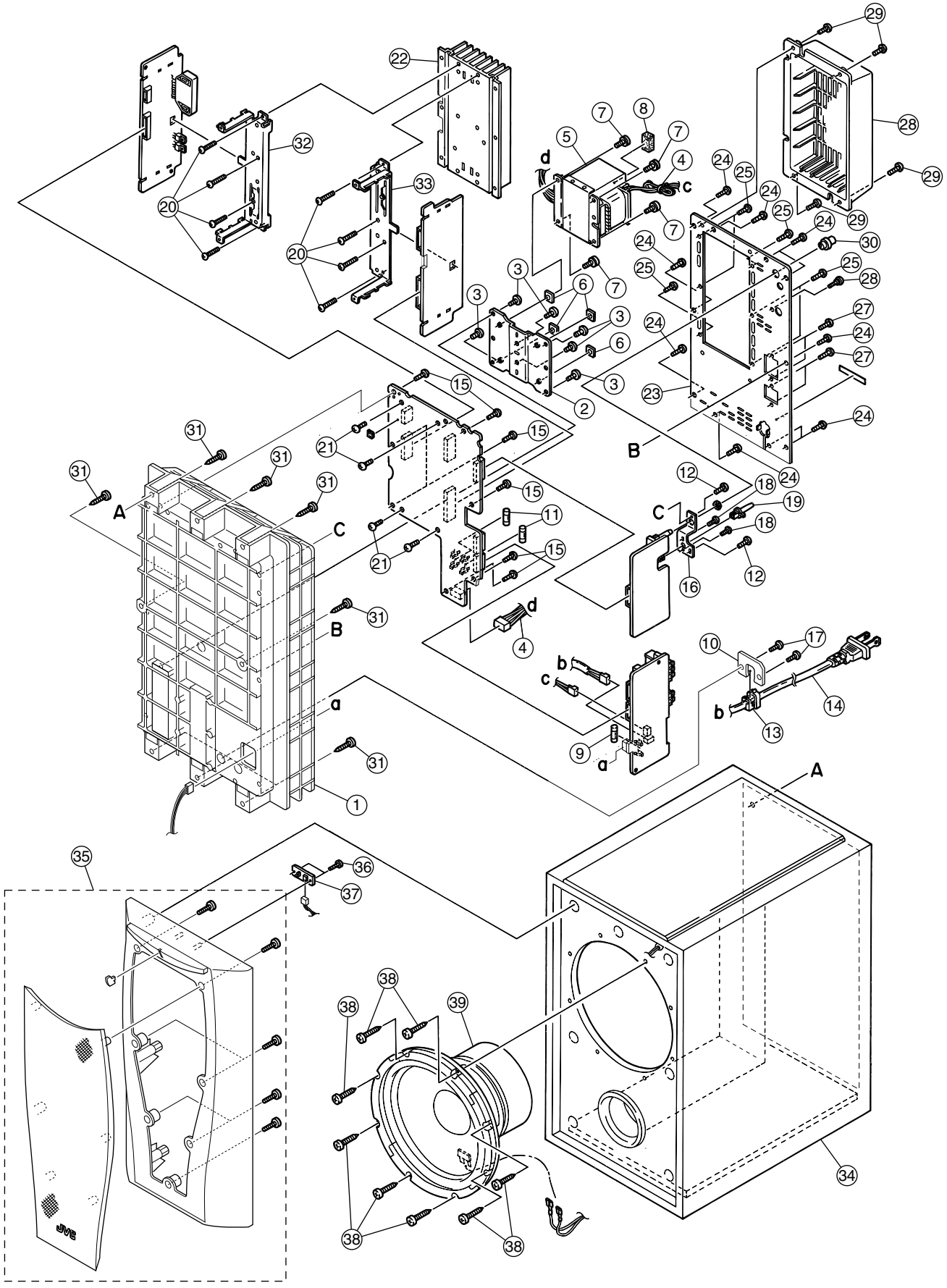
■ Parts list (DVD loading base)

Block No. MNMM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	LV41741-002A	SPECIAL SCREW	1	FOR PLATE AS	
	2	LV10647-006A	LOADING BASE	1		
	3	LV33481-004A	KICK LEVER UNIT	1		
	4	LV42819-002A	COMP.SPRING	1		
	5	LV21204-003A	SLIDE CAM	1		
	6	LV42977-001A	CAM SPRING	1		
	7	LV33336-001A	UD GEAR	1		
	8	LV43138-001A	DISC STOPPER	1		
	10	WJM0294-002A	E-SI C WIRE C-F	1		
	11	QJJ024-041504	SIN CR C-C WIRE	1		
	12	LV41741-001A	SPECIAL SCREW	1	FOR PWB	
	13	LV33482-006A	R.HOLD ASS'Y	1		
	14	LV42813-001A	WORM SHAFT	1		
	15	LV42812-002A	WORM GEAR	1		
	16	WFM214050	WASHER	1		
	17	LV33335-002A	CONNECT GEAR	1		
	18	LV33635-001A	SHAFT SUPPORTER	1		
	19	QYSBSF2006Z	SCREW	1		
	20	QYSPSPU2045M	SCREW	2		
	21	LV33676-002A	ASSIST BRACKET	1		
	22	QYSDST2005Z	SCREW	1		
	23	QYSBSF2006Z	SCREW	1		
	24	LV42811-001A	MOTOR PULLEY	1		
	25	QAR0219-001	LOADING MOTOR	1		
	26	VYSA1R4-056	SPACER	1		
	27	LV42833-001A	BELT	1		
	28	LV33334-001A	PULLEY GEAR	1		
	29	LV42814-001A	ROLLER GEAR	1		
	30	LV42815-002A	ROLLER SHAFT	1		
	31	LV42816-001A	ROLLER	2		
	32	QYWDL265019	SLIT WASHER	2		
	33	QYSBSF2006Z	SCREW	3	FOR R.HOLDER	
	34	LV10649-007A	CLAMPER BASE	1		
	35	LV33344-001A	YOKE	1		
	36	LV42930-003A	MAGNET	1		
	37	LV33346-003A	DVD CLAMPER	1		
	38	QYSPSGT1730M	MINI SCREW	1		
	39	LV33339-002A	SELECT LEVER L	1		
	40	LV33340-002A	SELECT LEVER R	1		
	41	LV42820-003A	TENSION SPRING	1		
	42	LV42821-004A	SD STOPPER	1		
	43	LV42822-002A	TOPSION SPRING	1		
	44	LV33342-002A	CLAMPER SPRING	1		
	45	LV42991-001A	STOPPER	1		
	46	LV41741-002A	SPECIAL SCREW	1		
	47	LV43038-001A	PAD	1		
	48	QYSBSF2006Z	SCREW	2	FOR C.BASE	
	49	LV21205-007A	PRESSURE PLATE	1		
	50	LV42872-004A	PLATE ASS'Y	1		
	51	QYSBSF2006Z	SCREW	1		
	52	LV42971-001A	TORSION SPRING	2		
	53	LV41741-002A	SPECIAL SCREW	1	FOR PWB	
	54	LV42965-001A	ROD SPRING	1		

Exploded view of general assembly and parts list (SP-THV70)

Block No. M 2 M M



■ Parts list (SP-THV70 General assembly)

Block No. M2MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	LV10447-001A	MOLD BASE	1		
	2	LV31723-001A	TRANS BRACKET	1		
	3	QYSBSF4008Z	SCREW	6	FOR TRANS BKT	
	4	QZW0004-001	WIRE CLAMP	2		
⚠	5	QQT0297-002	POWER TRANSF	1		
	6	E406309-002	SPACER	4		
	7	QYSDSTL4010E	SPECIAL SCREW	4		
	8	LV30225-078A	SPACER	1		
⚠	9	QMF51N1-4R0-J1	FUSE	1	F 403	
	10	LV42032-001A	AC BRACKET	1		
⚠	11	QMF51U1-8R0-J8	FUSE	2	F 504 F 505	
	12	QYSBSF3008Z	SCREW	2		
⚠	13	QHS3771-108	CORD STOPPER	1		
⚠	14	QMPD280-200-JC	POWER CORD	1	MOTHER TO H.BKT	
	15	QYSBSF3008Z	SCREW	7		
	16	LV31756-001A	VOLUME BRACKET	1		
	17	QYSBSF3008Z	SCREW	2	FOR BOLUME BKT	
	18	QYSBST3006Z	T.SCREW	2	FOR PUSH SW	
	19	E407321-002SM	PUSH BUTTON	1		
	20	QYSBSG3016Z	T.SCREW	8	FOR TRTO H/S	
	21	QYSBSG3008E	T.SCREW	4	MOTHER TO H/SBK	
⚠	22	LV20656-002A	HEAT SINK	1		
	23	LV20895-009A	REAR PANEL	1		
	24	QYSDSF3008M	SCREW	10	TO MOLD BASE	
	25	QYSBSGY3008E	SPECIAL SCREW	6	FOR H/S	
	26	E73562-003	SCREW	1	DIN.REAR	
	27	QYSBSGY3008E	SPECIAL SCREW	4	FOR SPK	
	28	LV20655-001A	H.S.COVER	1		
	29	QYSBSG3008M	T.SCREW	4		
	30	LV30734-002A	KNOB	1		
	31	QYSDSA4025M	T.SCREW	8		
	32	LV31722-002A	P.TR HOLDER	1		
	33	LV31722-003A	P.TR HOLDER	1		
	34	AA000027-02	SPEAKER SYSTEM	1	CABINET	
	35	AA000028-02	ORNAMENT PANEL	1		
	36	7004690801	TAPPING SCREW	2		
	37	6600007421	LED.INDICATOR	1		
	38	7005942502	SCREW	8		
	39	CR20000201	SPEAKER	1		

■ **Electrical parts list (Main board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 591	NCS31HJ-221X	C.CAPA. C.M		
	C 592	NCS31HJ-221X	C.CAPA. C.M		
	C 601	QFLC1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C 606	NCS31HJ-181X	C CAPACITOR		
	C 609	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V	
	C 611	QFLC1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C 616	NCS31HJ-181X	C CAPACITOR		
	C 619	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V	
	C 621	QFLC1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C 626	NCS31HJ-181X	C CAPACITOR		
	C 629	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V	
	C 631	NCB31CK-104X	C CAPACITOR		
	C 636	NCS31HJ-181X	C CAPACITOR		
	C 639	NCB31CK-104X	C CAPACITOR		
	C 646	NCS31HJ-181X	C CAPACITOR		
	C 649	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V	
	C 651	QFLC1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C 656	NCS31HJ-181X	C CAPACITOR		
	C 659	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V	
	C 671	QETN1AM-477Z	E CAPACITOR	470MF 20% 10V	
	C 672	NCB31CK-104X	C CAPACITOR		
	C 673	QETN1AM-477Z	E CAPACITOR	470MF 20% 10V	
	C 802	NCS31HJ-101X	C.CAPA. C.M		
	C 803	NCS31HJ-101X	C.CAPA. C.M		
	C 806	QEZ0554-479	E CAPACITOR	47000MF	
	C 807	QEKC0JM-227Z	E CAPACITOR	220MF 20% 6.3V	
	C 811	QCF31HZ-103Z	C CAPACITOR	.010MF +80:-20%	
	C 814	QEKC1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 815	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C 816	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 821	NCB31HK-103X	C CAPACITOR		
	C 822	QEKC1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 823	NCB31HK-102X	C CAPACITOR		
	C 824	NCB31HK-223X	C CAPACITOR		
	C 826	QEKC1HM-224Z	E CAPACITOR	.22MF 20% 50V	
	C 828	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 831	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C 836	NCS31HJ-101X	C.CAPA. C.M		
	C 837	NCB31HK-103X	C CAPACITOR		
	C 838	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
⚠	C 902	QFZ9075-683	M CAPACITOR	.068MF	
⚠	C 904	QCZ9079-102	C CAPACITOR	1000PF	
⚠	C 905	QCZ9079-102	C CAPACITOR	1000PF	
⚠	C 907	QETM2DM-157	E CAPACITOR	150MF 20%	
	C 908	QCZ0136-332Z	C CAPACITOR	3300PF	
	C 909	QCZ0136-101Z	C CAPACITOR	100PF	
	C 910	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C 913	QCZ0136-101Z	C CAPACITOR	100PF	
	C 914	QEZ0532-396Z	E CAPACITOR	39MF	
	C 915	QCBB1HK-471Y	C CAPACITOR	470PF 10% 50V	
⚠	C 916	QCZ9079-332	C CAPACITOR	3300PF	
	C 918	QCFB1HZ-104Y	C CAPACITOR	.10MF +80:-20%	
	C 951	NCS31HJ-101X	C.CAPA. C.M		
	C 952	QCZ0136-101Z	C CAPACITOR	100PF	
	C 953	NCS31HJ-101X	C.CAPA. C.M		
	C 954	NCS31HJ-101X	C.CAPA. C.M		
	C 956	NCS31HJ-101X	C.CAPA. C.M		
	C 957	NCS31HJ-101X	C.CAPA. C.M		
	C 960	QEZ0529-826Z	E CAPACITOR	82MF	
	C 961	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C 962	QEKC1HM-226Z	E CAPACITOR	22MF 20% 50V	
	C 963	QEZ0533-396Z	E CAPACITOR	39MF	
	C 964	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V	

⚠	Item	Parts number	Parts name	Remarks	Area
	C 965	QEZ0528-108	E CAPACITOR	1000MF	
	C 966	QETN1AM-477Z	E CAPACITOR	470MF 20% 10V	
	C 967	NCB31CK-104X	C CAPACITOR		
	C 968	NCB31CK-104X	C CAPACITOR		
	C 969	QETN1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C 970	NCB31CK-104X	C CAPACITOR		
	C 973	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 976	QFVC1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 977	QFVC1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 978	QEKC1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 979	QEZ0530-827	E CAPACITOR	820MF	
	C 980	QEKC1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 981	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C 982	QEZ0531-567	E CAPACITOR	560MF	
	C 984	QETN1EM-227Z	E CAPACITOR	220MF 20% 25V	
	C 985	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 986	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 987	QEZ0532-187Z	E CAPACITOR	180MF	
	C 989	QEKC1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C 990	QEKC1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 992	QETN1HM-474Z	E CAPACITOR	.47MF 20% 50V	
	C 993	NCS31HJ-101X	C.CAPA. C.M		
	C 994	QCBB1HK-223Y	C CAPACITOR	.022MF 10% 50V	
	C 997	QEKC1CM-227Z	E CAPACITOR	220MF 20% 16V	
	CN106	QGA2501C1-02	2P CONNECTOR		
	CN592	QGF1205F1-04	CONNECTOR	EXP VERSION	
	CN801	QGB2027M7-26S	CONNECTOR	TO DVD MODULE	
	CN802	QGF1016C1-13	CONNECTOR	TO FRONT	
	CN803	QGB2027M7-26S	CONNECTOR	TO DVD MODULE	
	CN805	QGF1205C1-11	CONNECTOR	TO TUNER	
	CN806	QGF1016C1-31	CONNECTOR	TO AUDIO	
	CN812	QGA2001F1-05	CONNECTOR	TO W812	
	CN813	QGF1205C1-04	CONNECTOR	TO KEY	
	CN814	QGA2001C1-03	3P PLUG ASSY	TO DOOR-SW	
	CN815	QGF1205C1-04	CONNECTOR	TO TERMINAL	
	CN972	QGA2001C1-02	2P PLUG ASSY	FOR DC FAN	
⚠	CP951	ICP-N10-T	ICP		
	C1184	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C1185	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C1186	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C1187	QETN1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C1351	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C1352	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C1801	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C1802	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C1803	QCZ0202-155Z	ML C CAPA I/M	1.5MF	
	C8721	NCB31HK-103X	C CAPACITOR		
	C8722	NCB31HK-103X	C CAPACITOR		
	C8728	NCF21AZ-475X	C CAPACITOR		
	D 591	MTZJ6.2C-T2	Z DIODE I/M		
	D 801	1SS133-T2	228ZIODE IM		
	D 802	1SS133-T2	228ZIODE IM		
	D 803	1SS133-T2	228ZIODE IM		
	D 807	1SS133-T2	228ZIODE IM		
	D 808	1SS133-T2	228ZIODE IM		
	D 809	1SS133-T2	228ZIODE IM		
	D 811	1SS133-T2	228ZIODE IM		
	D 812	MTZJ4.7B-T2	Z DIODE I M		
	D 820	1SS133-T2	228ZIODE IM		
	D 821	DAN202K-X	D.TRANSISTOR		
⚠	D 901	S1WB/A/60-4101	BRIDGE DIODE		
	D 902	ERA18-04-T1	FR DIODE		
	D 903	ERA18-04-T1	FR DIODE		

■ **Electrical parts list (Main board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	D 904	ERA18-04-T1	FR DIODE		
	D 908	ERA18-04-T1	FR DIODE		
	D 910	ERA18-04-T1	FR DIODE		
	D 911	ERA18-04-T1	FR DIODE		
	D 950	MTZJ36C-T2	Z.DIODE I.M		
	D 951	ERA18-04-T1	FR DIODE	FUJI	
	D 952	ERA18-04-T1	FR DIODE	FUJI	
⚠	D 953	FMB-24	FUSEIODE		
⚠	D 954	EU2YX-LFH6K	FR DIODE		
⚠	D 956	EU2YX-LFH6K	FR DIODE		
⚠	D 957	EU2YX-LFH6K	FR DIODE		
	D 958	1SS133-T2	228ZIODE IM		
	D 960	MTZJ3.6B-T2	S.B.DIODE		
	D 970	1SS133-T2	228ZIODE IM		
	D 975	1SS133-T2	228ZIODE IM		
	D 976	1SS133-T2	228ZIODE IM		
	D 984	1SS133-T2	228ZIODE IM		
	D 991	MTZJ5.1C-T2	ZENER DIODE		
	D1184	MTZJ7.5C-T2	ZENER DIODE		
	D1185	MTZJ7.5C-T2	ZENER DIODE		
	D1351	MA700A-T2	S.B.DIODE		
	D1352	MTZJ6.8A-T2	ZENER DIODE		
	D8721	SELU2L10C-T10	LED	DISC LIGHT	
	D8722	SELU2L10C-T10	LED	DISC LIGHT	
	EP801	QNZ0136-001Z	EARTH PLATE		
	EP802	QNZ0136-001Z	EARTH PLATE		
	EP803	QNZ0136-001Z	EARTH PLATE		
	EP805	QNZ0136-001Z	EARTH PLATE		
	EP951	QNZ0136-001Z	EARTH PLATE		
	EP952	QNZ0136-001Z	EARTH PLATE		
	FC901	QNG0003-001Z	FUSE CLIP		
	FC902	QNG0003-001Z	FUSE CLIP		
	HS805	LE40505-001A	HEAT SINK	FOR IC805	
	HS901	E70306-002	HEAT SINK	FOR IC901	
	HS964	LE40505-001A	HEAT SINK		
	IC108	TA8409S	IC	MOTOR DRIVER	
	IC601	LA73054-X	IC		
	IC801	MN101C49GKD1	IC	ROM WRITTEN ONE	
	IC803	BD4740G-W	IC I.M	RESET	
	IC805	NJM78M05FA	IC	A5V	
	IC871	RPM6938-SV4	IC	FOR VERTICAL	
⚠	IC901	STR-G6651	IC		
	IC951	PQ05RD21	IC		
	IC953	NJM78M05FA	IC		
	J 592	QNS0089-001	3.5 JACK	AV COMPULINK 2	
	J 601	QNN0434-001	PIN JACK	COMPOSITE/S	
	J 603	QNN0386-001	PIN JACK	COMPONENT	
	K 601	NRSA63J-0R0X	MG RESISTOR		
	K 605	NQR0201-018X	INDUCTOR		
	K 611	NRSA63J-0R0X	MG RESISTOR		
	K 621	NRSA63J-0R0X	MG RESISTOR		
	K 631	NRSA63J-0R0X	MG RESISTOR		
	K 641	NRSA63J-0R0X	MG RESISTOR		
	K 651	NRSA63J-0R0X	MG RESISTOR		
	K 902	QQR0779-001Z	INDUCTOR		
	L 801	QQL25CK-221Z	INDUCTOR		
⚠	L 901	QQR1105-001	LINE FILTER		
	L 951	QQL01BK-R22Z	INDUCTOR		
	L 952	QQL44BK-220Z	INDUCTOR		
	L 955	QQL26AK-220Z	INDUCTOR		
	L 957	QQL244K-100Z	INDUCTOR		
	L 959	QQL244K-100Z	INDUCTOR		
⚠	P 901	QNC0082-001	AC INLET		

⚠	Item	Parts number	Parts name	Remarks	Area
⚠	PC901	PC123Y02	IC(PHOTO COUPLE		
⚠	PC902	PC123Y02	IC(PHOTO COUPLE		
	PP904	QZW0038-001	WIRE CLAMP		
	PP905	QZW0038-001	WIRE CLAMP		
	PP906	QZW0038-001	WIRE CLAMP		
	Q 671	KRC102S-X	DIGITAL.TR		
	Q 801	KRC107S-X	DIGITAL.TR		
	Q 802	KRC102S-X	DIGITAL.TR		
	Q 803	KRC102S-X	DIGITAL.TR		
	Q 804	KRC102S-X	DIGITAL.TR		
	Q 805	KTA1267/YG/-T	TRANSISTOR		
	Q 807	KRA102S-X	DIGITAL.TR		
	Q 811	KRC102S-X	DIGITAL.TR		
	Q 812	KTA1271/OY/-T	TRANSISTOR		
	Q 813	KRC102S-X	DIGITAL.TR		
	Q 815	KRC102S-X	DIGITAL.TR	BEAT CUT	
	Q 816	KRC102S-X	DIGITAL.TR		
	Q 818	KRC111M-T	TR I/M		
	Q 951	2SC3576-JVC-T	TRANSISTOR I/M		
	Q 953	KTA1267/YG/-T	TRANSISTOR		
	Q 954	SI2305DS-X	TRANSISTOR		
	Q 955	DTC124EKA-X	TRANSISTOR		
	Q 957	KRC117S-X	TR I/M		
	Q 958	KTA1271/OY/-T	TRANSISTOR		
	Q 959	KRC101M-T	TR I/M		
	Q 960	KTA1504/YG/-X	TRANSISTOR		
	Q 961	KTC3203/OY/-T	TRANSISTOR		
	Q 964	KTA1046/Y/	TRANSISTOR		
	Q 965	KTC3875/YG/-X	TR I/M		
	Q 991	KTC3875/YG/-X	TR I/M		
	Q1181	KTC3203/OY/-T	TRANSISTOR	E.VOL +7V	
	Q1182	KTA1271/OY/-T	TRANSISTOR	E.VOL -7V	
	Q1351	KTA1271/OY/-T	TRANSISTOR	TUNER 5V	
	Q1352	KTC3875/YG/-X	TR I/M		
	Q1801	KRC103M-T	TR I/M		
	Q8711	KRA102S-X	DIGITAL.TR		
	Q8712	KRC102S-X	DIGITAL.TR		
	Q8713	DTC114TKA-X	TRANSISTOR		
	R 501	NRSA63J-0R0X	MG RESISTOR		
	R 502	NRSA63J-332X	MG RESISTOR		
	R 503	NRSA63J-392X	MG RESISTOR		
	R 504	NRSA63J-682X	MG RESISTOR		
	R 505	NRSA63J-153X	MG RESISTOR		
	R 506	NRSA63J-0R0X	MG RESISTOR		
	R 507	NRSA63J-332X	MG RESISTOR		
	R 508	NRSA63J-392X	MG RESISTOR		
	R 509	NRSA63J-682X	MG RESISTOR		
	R 510	NRSA63J-153X	MG RESISTOR		
	R 593	NRSA63J-101X	MG RESISTOR		
	R 594	NRSA63J-101X	MG RESISTOR		
	R 601	NRSA63J-0R0X	MG RESISTOR		
	R 602	NRSA63J-360X	C RESISTOR		
	R 606	NRSA63J-0R0X	MG RESISTOR		
	R 609	NRSA63J-750X	MG RESISTOR		
	R 611	NRSA63J-0R0X	MG RESISTOR		
	R 612	NRSA63J-360X	C RESISTOR		
	R 616	NRSA63J-0R0X	MG RESISTOR		
	R 619	NRSA63J-750X	MG RESISTOR		
	R 621	NRSA63J-0R0X	MG RESISTOR		
	R 624	NRSA63J-0R0X	MG RESISTOR		
	R 625	NRSA63J-330X	MG RESISTOR		
	R 626	NRSA63J-0R0X	MG RESISTOR		
	R 629	NRSA63J-750X	MG RESISTOR		

■ **Electrical parts list (Main board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	R 631	NRSA63J-0R0X	MG RESISTOR		
	R 632	NRSA63J-360X	C RESISTOR		
	R 636	NRSA63J-0R0X	MG RESISTOR		
	R 639	NRSA63J-750X	MG RESISTOR		
	R 649	NRSA63J-750X	MG RESISTOR		
	R 659	NRSA63J-750X	MG RESISTOR		
	R 671	NRSA63J-103X	MG RESISTOR		
	R 672	NRSA63J-103X	MG RESISTOR		
	R 673	NRSA63J-103X	MG RESISTOR		
	R 674	NRSA63J-103X	MG RESISTOR		
	R 676	NRSA63J-103X	MG RESISTOR		
	R 813	QRE141J-331Y	C RESISTOR	330 5% 1/4W	
	R 814	NRSA63J-103X	MG RESISTOR		
	R 815	NRSA63J-221X	MG RESISTOR		
	R 816	NRSA63J-104X	MG RESISTOR		
	R 817	NRSA63J-223X	MG RESISTOR		
	R 818	NRSA63J-472X	MG RESISTOR		
	R 819	NRSA63J-474X	MG RESISTOR		
⚠	R 821	QRZ9006-4R7X	F RESISTOR	4.7 1/4W	
	R 822	NRSA63J-223X	MG RESISTOR		
	R 823	NRSA63J-223X	MG RESISTOR		
	R 831	NRSA63J-103X	MG RESISTOR		
	R 832	NRSA63J-103X	MG RESISTOR		
	R 833	NRSA63J-103X	MG RESISTOR		
	R 834	NRSA63J-104X	MG RESISTOR		
	R 835	NRSA63J-103X	MG RESISTOR		
	R 836	NRSA63J-103X	MG RESISTOR		
	R 838	NRSA63J-103X	MG RESISTOR		
	R 840	NRSA63J-103X	MG RESISTOR		
	R 841	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 842	NRSA63J-103X	MG RESISTOR		
	R 843	NRSA63J-102X	MG RESISTOR		
	R 844	NRSA63J-202X	MG RESISTOR		
	R 847	NRSA63J-221X	MG RESISTOR		
	R 848	NRSA63J-221X	MG RESISTOR		
	R 849	NRSA63J-221X	MG RESISTOR		
	R 850	NRSA63J-221X	MG RESISTOR		
	R 851	NRSA63J-221X	MG RESISTOR		
	R 852	NRSA63J-123X	MG RESISTOR		
	R 853	NRSA63J-221X	MG RESISTOR		
	R 854	NRSA63J-393X	MG RESISTOR		
	R 855	NRSA63J-223X	MG RESISTOR		
	R 856	NRSA63J-123X	MG RESISTOR		
	R 857	NRSA63J-393X	MG RESISTOR		
	R 858	NRSA63J-153X	MG RESISTOR		
	R 859	NRSA63J-104X	MG RESISTOR		
	R 861	NRSA63J-102X	MG RESISTOR		
	R 862	NRSA63J-102X	MG RESISTOR		
	R 864	NRSA63J-102X	MG RESISTOR		
	R 866	NRSA63J-102X	MG RESISTOR		
	R 867	NRSA63J-103X	MG RESISTOR		
	R 868	NRSA63J-103X	MG RESISTOR		
	R 871	NRSA63J-332X	MG RESISTOR		
	R 872	NRSA63J-332X	MG RESISTOR		
	R 873	NRSA63J-473X	MG RESISTOR		
	R 891	QRE141J-181Y	C RESISTOR	180 5% 1/4W	
	R 892	QRE141J-151Y	C RESISTOR	150 5% 1/4W	
	R 895	NRSA63J-102X	MG RESISTOR		
	R 896	NRSA63J-103X	MG RESISTOR		
	R 901	QRL01DJ-683X	OMF RESISTOR	68K 5% 1/1W	
	R 903	QRE141J-270Y	C RESISTOR	27 5% 1/4W	
	R 904	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 905	QRL027J-683	UNF OMF RESISTO	68K 5% 1/2W	
	R 906	QRJ146J-681X	UNF C RESISTOR	680 5% 1/4W	
	R 907	QRT027J-R47	MF RESISTOR	5% 1/2W	
	R 908	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 910	QRE141J-754Y	C RESISTOR	750K 5% 1/4W	

⚠	Item	Parts number	Parts name	Remarks	Area
	R 911	QRE141J-754Y	C RESISTOR	750K 5% 1/4W	
	R 921	QRZ9037-335	F RESISTOR	3.3M 1/4W	
	R 952	NRSA63J-103X	MG RESISTOR		
	R 953	NRSA63J-223X	MG RESISTOR		
⚠	R 954	QRZ9005-100X	F RESISTOR	10 1/4W	
	R 955	NRSA63J-223X	MG RESISTOR		
	R 960	NRSA63J-101X	MG RESISTOR		
	R 961	NRSA63J-681X	MG RESISTOR		
	R 962	NRSA63J-105X	MG RESISTOR		
	R 963	NRSA63J-101X	MG RESISTOR		
	R 964	NRSA63J-105X	MG RESISTOR		
	R 965	NRSA63J-103X	MG RESISTOR		
	R 966	NRSA63J-221X	MG RESISTOR		
	R 969	NRSA63J-221X	MG RESISTOR		
	R 971	NRSA63J-472X	MG RESISTOR		
	R 972	NRSA63J-122X	MG RESISTOR		
	R 977	NRSA63J-102X	MG RESISTOR		
	R 980	NRSA63J-272X	MG RESISTOR		
	R 981	NRSA63J-223X	MG RESISTOR		
	R 983	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 984	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 985	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 986	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 987	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 988	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 989	NRSA63J-333X	MG RESISTOR		
	R 990	NRSA63J-333X	MG RESISTOR		
	R 993	QRZ9006-4R7X	F RESISTOR	4.7 1/4W	
⚠	R1181	QRZ9005-100X	F RESISTOR	10 1/4W	
	R1182	NRSA63J-222X	MG RESISTOR		
	R1183	NRSA63J-222X	MG RESISTOR		
⚠	R1184	QRZ9005-100X	F RESISTOR	10 1/4W	
	R1301	NRSA63J-682X	MG RESISTOR		
	R1302	NRSA63J-682X	MG RESISTOR		
	R1303	NRSA63J-102X	MG RESISTOR		
	R1304	NRSA63J-102X	MG RESISTOR		
	R1351	NRSA63J-472X	MG RESISTOR		
	R1352	NRSA63J-103X	MG RESISTOR		
	R1353	NRSA63J-821X	MG RESISTOR		
	R1802	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R1803	QRE141J-243Y	C RESISTOR	24K 5% 1/4W	
	R1806	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R1807	QRE141J-151Y	C RESISTOR	150 5% 1/4W	
	R8721	NRSA63J-681X	MG RESISTOR		
	R8722	NRSA63J-681X	MG RESISTOR		
	R8723	NRSA63J-681X	MG RESISTOR		
	R8724	NRSA63J-681X	MG RESISTOR		
	R8733	NRSA63J-104X	MG RESISTOR		
	R8741	NRSA63J-331X	MG RESISTOR		
	S 501	QSW0683-001Z	PUSH SWITCH		
	S 502	QSW0683-001Z	PUSH SWITCH		
	S 503	QSW0683-001Z	PUSH SWITCH		
	S 504	QSW0683-001Z	PUSH SWITCH		
	S 505	QSW0683-001Z	PUSH SWITCH		
	S 506	QSW0683-001Z	PUSH SWITCH		
	S 507	QSW0683-001Z	PUSH SWITCH		
	S 508	QSW0683-001Z	PUSH SWITCH		
	S 509	QSW0683-001Z	PUSH SWITCH		
	S 510	QSW0683-001Z	PUSH SWITCH		
	S 551	QSW0851-001	SW	DOOR SW	
	S 802	QSW0454-001	SWITCH	VERT/HOR SW	
⚠	T 901	QQS0097-001	SW TRANSF	DELTA ELECTRONI	
	W 802	QJK018-031802	SIN CR C-B WIRE		
	W 812	QJK021-052402	SIN CR C-B WIRE	DISC LED	
	X 801	QAX0246-001Z	C RESONATOR	8MHZ	

■ **Electrical parts list (Front board)** **Block No. 02**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 701	NCB31CK-103X	C CAPACITOR		
	C 702	NCB31CK-103X	C CAPACITOR		
	C 706	NEA70JM-107X	E.CAPACITOR		
	C 707	NCB31CK-103X	C CAPACITOR		
	C 709	NEA71EM-475X	E.CAPACITOR.		
	C 710	NEA71EM-475X	E.CAPACITOR.		
	C 733	NEA70JM-107X	E.CAPACITOR		
	CN701	QGF1016F2-13W	CONNECTOR	FRONT TO MAIN	
	D 701	EL-19-21SDRC/-X	LED		
	D 702	EL-19-21SDRC/-X	LED		
	D 703	EL-19-21SDRC/-X	LED		
	D 704	EL-19-21SDRC/-X	LED		
	D 705	EL-19-21SDRC/-X	LED		
	D 706	EL-19-21SDRC/-X	LED		
	D 707	EL-19-21SDRC/-X	LED		
	D 708	EL-19-21SDRC/-X	LED		
	D 709	EL-19-21SDRC/-X	LED		
	D 710	EL-19-21SDRC/-X	LED		
	D 711	EL-19-21SDRC/-X	LED		
	D 712	EL-19-21SDRC/-X	LED		
	D 713	EL-19-21SDRC/-X	LED		
	D 714	EL-19-21SDRC/-X	LED		
	D 715	EL-19-21SDRC/-X	LED		
	D 716	EL-19-21SDRC/-X	LED		
	D 717	EL-19-21SDRC/-X	LED		
	D 718	EL-19-21SDRC/-X	LED		
	D 719	EL-19-21SDRC/-X	LED		
	D 720	EL-19-21SDRC/-X	LED		
	DI701	QLF0097-001	FL TUBE		
	IC701	MN101C35DKB	IC(MPU)		
	IC711	RPM6938-SV4	IC	FOR HORIZONTAL	
	Q 706	KRC102S-X	DIGITAL.TR		
	Q 707	KRC102S-X	DIGITAL.TR		
	Q 709	KRA102S-X	DIGITAL.TR		
	Q 710	KRC102S-X	DIGITAL.TR		
	Q 711	KRA102S-X	DIGITAL.TR		
	Q 712	KRC102S-X	DIGITAL.TR		
	Q 713	KRA102S-X	DIGITAL.TR		
	Q 721	KRA102S-X	DIGITAL.TR		
	Q 722	KRA102S-X	DIGITAL.TR		
	Q 723	KRC102S-X	DIGITAL.TR		
	R 752	NRSA63J-102X	MG RESISTOR		
	R 753	NRSA63J-102X	MG RESISTOR		
	R 755	NRSA63J-102X	MG RESISTOR		
	R 756	NRSA63J-102X	MG RESISTOR		
	R 761	NRS181J-221X	MG RESISTOR		
	R 762	NRS181J-122X	MG RESISTOR		
	R 763	NRS181J-122X	MG RESISTOR		
	R 764	NRS181J-152X	MG RESISTOR		
	R 765	NRS181J-152X	MG RESISTOR		
	R 766	NRS181J-221X	MG RESISTOR		
	R 767	NRS181J-122X	MG RESISTOR		
	R 768	NRS181J-122X	MG RESISTOR		
	R 769	NRS181J-152X	MG RESISTOR		
	R 770	NRS181J-152X	MG RESISTOR		
	R 771	NRSA63J-391X	MG RESISTOR		
	R 772	NRS181J-391X	MG RESISTOR		
	X 701	NAX0248-001X	C OSCILLATOR	8MHZ	

■ **Electrical parts list (DSP/Audio board)** **Block No. 03**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 401	NCB31HK-102X	C CAPACITOR		
	C 402	NCB31HK-102X	C CAPACITOR		
	C 403	NEA70JM-476X	E.CAPACITOR		
	C 404	NEA70JM-476X	E.CAPACITOR		
	C 405	NCB31CK-104X	C CAPACITOR		
	C 406	NCB31CK-104X	C CAPACITOR		
	C 407	NCB31CK-104X	C CAPACITOR		
	C 408	NEA70JM-476X	E.CAPACITOR		
	C 411	NCB31CK-104X	C CAPACITOR		
	C 413	NCB31CK-104X	C CAPACITOR		
	C 421	NEA70JM-107X	E.CAPACITOR		
	C 422	NCB31CK-103X	C CAPACITOR		
	C 423	NCS31HJ-101X	C.CAPA. C.M		
	C 424	NCS31HJ-121X	C CAPACITOR		
	C 425	NCB31AK-474X	C CAPACITOR		
	C 426	NCB31CK-103X	C CAPACITOR		
	C 427	NCB31CK-104X	C CAPACITOR		
	C 428	NCB31CK-104X	C CAPACITOR		
	C 429	NCB31CK-104X	C CAPACITOR		
	C 430	NCB31CK-473X	C CAPACITOR		
	C 431	NCS31HJ-180X	C CAPACITOR		
	C 432	NCS31HJ-220X	C CAPACITOR		
	C 433	NCB31CK-103X	C CAPACITOR		
	C 434	NEA70JM-107X	E.CAPACITOR		
	C 435	NCB31CK-103X	C CAPACITOR		
	C 436	NEA70JM-476X	E.CAPACITOR		
	C 437	NCB31CK-103X	C CAPACITOR		
	C 442	NCS31HJ-101X	C.CAPA. C.M		
	C 443	NCS31HJ-101X	C.CAPA. C.M		
	C 444	NCB31CK-103X	C CAPACITOR		
	C 445	NEA70JM-107X	E.CAPACITOR		
	C 450	NCS31HJ-471X	C CAPACITOR		
	C 451	NCB31CK-103X	C CAPACITOR		
	C 452	NEA70JM-107X	E.CAPACITOR		
	C 453	NEA70JM-107X	E.CAPACITOR		
	C 454	NCB31CK-103X	C CAPACITOR		
	C 455	NEA70JM-107X	E.CAPACITOR		
	C 456	NCB31CK-104X	C CAPACITOR		
	C 458	NCB31CK-103X	C CAPACITOR		
	C 459	NCB31CK-103X	C CAPACITOR		
	C 460	NEA71CM-476X	E CAPACITOR		
	C 461	NEA71CM-476X	E CAPACITOR		
	C 462	NCB31CK-103X	C CAPACITOR		
	C 463	NEA70JM-107X	E.CAPACITOR		
	C 466	NEA71CM-476X	E CAPACITOR		
	C 467	NCF31CZ-104X	C CAPACITOR		
	C 493	NCB30JK-105X	C CAPACITOR		
	C 494	NCB31CK-103X	C CAPACITOR		
	C 495	NCB31CK-103X	C CAPACITOR		
	CN401	QGF1016F2-31W	CONNECTOR		
	C1101	NCB31HK-331X	C CAPACITOR		
	C1102	NCB31HK-331X	C CAPACITOR		
	C1103	NEA71EM-475X	E.CAPACITOR.		
	C1104	NEA71EM-475X	E.CAPACITOR.		
	C1121	NCB31CK-223X	C CAPACITOR		
	C1122	NCB31HK-822X	C CAPACITOR		
	C1123	NCB31HK-153X	C CAPACITOR		
	C1124	NCB21CK-334X	C.CAPA. C.M		
	C1125	NCB31CK-223X	C CAPACITOR		
	C1126	NCB31CK-223X	C CAPACITOR		
	C1127	NEA71EM-475X	E.CAPACITOR.		
	C1128	NEA71EM-475X	E.CAPACITOR.		
	C1129	NCB31HK-822X	C CAPACITOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	C1130	NCB21CK-334X	C.CAPA. C.M		
	C1131	NCB31HK-153X	C CAPACITOR		
	C1141	NEA71CM-476X	E CAPACITOR		
	C1142	NEA71CM-476X	E CAPACITOR		
	C1176	NCB31CK-103X	C CAPACITOR		
	C1177	NCB31CK-103X	C CAPACITOR		
	C1178	NCB31CK-103X	C CAPACITOR		
	C1179	NCB31CK-103X	C CAPACITOR		
	C1180	NCB31CK-103X	C CAPACITOR		
	C1181	NCB31CK-103X	C CAPACITOR		
	C1183	NEA71EM-475X	E.CAPACITOR.		
	C1201	NEA71EM-475X	E.CAPACITOR.		
	C1202	NEA71EM-475X	E.CAPACITOR.		
	C1203	NEA71EM-475X	E.CAPACITOR.		
	C1204	NEA71EM-475X	E.CAPACITOR.		
	C1205	NEA71EM-475X	E.CAPACITOR.		
	C1206	NEA71EM-475X	E.CAPACITOR.		
	C1207	NEA71EM-475X	E.CAPACITOR.		
	C1208	NEA71EM-475X	E.CAPACITOR.		
	C1209	NEA71EM-475X	E.CAPACITOR.		
	C1210	NEA71EM-475X	E.CAPACITOR.		
	C1211	NEA71EM-475X	E.CAPACITOR.		
	C1212	NEA71EM-475X	E.CAPACITOR.		
	C1213	NEA71EM-475X	E.CAPACITOR.		
	C1214	NEA71EM-475X	E.CAPACITOR.		
	C1215	NEA71EM-475X	E.CAPACITOR.		
	C1216	NEA71EM-475X	E.CAPACITOR.		
	C1217	NEA71EM-475X	E.CAPACITOR.		
	C1218	NEA71EM-475X	E.CAPACITOR.		
	C1221	NCS31HJ-470X	C.CAPA. C.M		
	C1222	NCS31HJ-470X	C.CAPA. C.M		
	C1223	NCS31HJ-470X	C.CAPA. C.M		
	C1224	NCS31HJ-470X	C.CAPA. C.M		
	C1225	NCS31HJ-471X	C CAPACITOR		
	C1226	NCS31HJ-470X	C.CAPA. C.M		
	C1251	NCB31CK-103X	C CAPACITOR		
	C1252	NCB31CK-103X	C CAPACITOR		
	C2503	NEA71EM-475X	E.CAPACITOR.		
	C2504	NEA71EM-475X	E.CAPACITOR.		
	C2507	NCS31HJ-560X	C CAPACITOR		
	C2508	NCS31HJ-560X	C CAPACITOR		
	C2511	NCB31AK-474X	C CAPACITOR		
	C2512	NCB31AK-474X	C CAPACITOR		
	C2513	NCB31HK-182X	C CAPACITOR		
	C2514	NCB31HK-182X	C CAPACITOR		
	C2515	NCS31HJ-181X	C CAPACITOR		
	C2516	NCS31HJ-181X	C CAPACITOR		
	C2517	NCB31HK-562X	C CAPACITOR		
	C2518	NCB31HK-562X	C CAPACITOR		
	C2519	NCF31CZ-104X	C CAPACITOR		
	C2520	NCF31CZ-104X	C CAPACITOR		
	C2525	NCB21HK-102X	C CAPACITOR		
	C2526	NCB21HK-102X	C CAPACITOR		
	C2527	NEA71EM-475X	E.CAPACITOR.		
	C2528	NEA71EM-475X	E.CAPACITOR.		
	C2531	NCS31HJ-560X	C CAPACITOR		
	C2532	NCS31HJ-560X	C CAPACITOR		
	C2533	NEA71HM-105X	E.CAPA. C.M.		
	C2534	NEA71HM-105X	E.CAPA. C.M.		
	C2539	NCF31CZ-104X	C CAPACITOR		
	C2540	NCF31CZ-104X	C CAPACITOR		
	C2541	NEA71EM-475X	E.CAPACITOR.		
	C2542	NEA71EM-475X	E.CAPACITOR.		

■ **Electrical parts list (DSP/Audio board)** **Block No. 03**

⚠	Item	Parts number	Parts name	Remarks	Area
	C2553	NCB31HK-562X	C CAPACITOR		
	C2554	NCB31HK-562X	C CAPACITOR		
	C2555	NCF31CZ-104X	C CAPACITOR		
	C2556	NCF31CZ-104X	C CAPACITOR		
	C2561	NEA71HM-105X	E.CAPA. C.M.		
	C2562	NEA71HM-105X	E.CAPA. C.M.		
	C2563	NCS31HJ-220X	C CAPACITOR		
	C2564	NCS31HJ-220X	C CAPACITOR		
	C2569	NCF31CZ-104X	C CAPACITOR		
	C2570	NCF31CZ-104X	C CAPACITOR		
	C2575	NCB31HK-102X	C CAPACITOR		
	C2576	NCB31HK-102X	C CAPACITOR		
	C2577	NEA71EM-475X	E.CAPACITOR.		
	C2578	NEA71EM-475X	E.CAPACITOR.		
	C2581	NEA71HM-105X	E.CAPA. C.M.		
	C2582	NEA71CM-106X	E.CAPACITOR		
	C2583	NCS31HJ-220X	C CAPACITOR		
	C2584	NCS31HJ-560X	C CAPACITOR		
	C2589	NCF31CZ-104X	C CAPACITOR		
	C2590	NCF31CZ-104X	C CAPACITOR		
	C2592	NCB31HK-472X	C CAPACITOR		
	C2594	NCB31HK-223X	C CAPACITOR		
	C2595	NCB31HK-102X	C CAPACITOR		
	C2597	NEA71EM-475X	E.CAPACITOR.		
	C2598	NEA71EM-475X	E.CAPACITOR.		
	C2599	NCF31CZ-104X	C CAPACITOR		
	C2600	NCF31CZ-104X	C CAPACITOR		
	C2601	NEA71EM-475X	E.CAPACITOR.		
	C2602	NEA71EM-475X	E.CAPACITOR.		
	C2603	NEA71EM-475X	E.CAPACITOR.		
	C2604	NEA71EM-475X	E.CAPACITOR.		
	D 401	DAN202K-X	D.TRANSISTOR		
	D 403	DAN202K-X	D.TRANSISTOR		
	D 405	DAN202K-X	D.TRANSISTOR		
	D 406	DAP202K-X	D.TR. C.M		
	IC151	BU4066BCF-X	IC	INPUT SELECT	
	IC153	M62446FP-X	IC	E.V0LUME	
	IC158	NJM4580M-X	IC	L/R OUT	
	IC159	NJM4580M-X	IC	SL/SR OUT	
	IC160	NJM4580M-X	IC	C/LFE OUT	
	IC401	AK4527BVQP	IC	CODEC	
	IC402	MM1613DN-X	IC	A3.3V REG	
	IC403	TC9446F-025	IC	DSP	
	IC404	W24L010AJ-12-X	IC	SRAM	
	IC406	UPD784215AGC167	IC(MICRO C ROM)	DSP MICOM	
	IC407	MM1563DF-X	IC	D3.3V REG	
	IC408	TC74HC00AF-W	IC		
	IC409	GP1FA351RZ	OPT RECEIVER	RECIEVER	
	IC510	BA15218F-XE	IC	AUX IN	
	IC511	BA15218F-XE	IC	AUX IN	
	IC531	BA15218F-XE	IC	L/R OUT	
	IC561	BA15218F-XE	IC	SL/SR OUT	
	IC581	BA15218F-XE	IC	C/LFE OUT	
	IC591	BA15218F-XE	IC	C/LFE OUT	
	J1101	QNN0385-001	PIN JACK	AUX IN	
	J1103	QND0079-001	DIN CONNECTOR	SYSTEM CONECT	
	K 401	NQR0319-001X	F.BEADS C.M		
	LC401	NQR0321-001X	EMI FILTER C.M		
	Q 401	KRA104S-X	DIGITAL.TR		
	Q 402	KRC107S-X	DIGITAL.TR		
	Q 403	KRC107S-X	DIGITAL.TR		
	Q1131	IMX9-W	TRANSISTOR		
	Q1133	IMX9-W	TRANSISTOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	Q1135	IMX9-W	TRANSISTOR		
	Q1137	2SD2114K/VW/-X	CHIP TRANSISTOR		
	Q1251	KRA104S-X	DIGITAL.TR		
	Q1252	KRA104S-X	DIGITAL.TR		
	Q2501	KRA104S-X	DIGITAL.TR		
	Q2502	KRC107S-X	DIGITAL.TR		
	Q2521	IMX9-W	TRANSISTOR		
	Q2561	IMX9-W	TRANSISTOR		
	Q2581	IMX9-W	TRANSISTOR		
	R 403	NRSA63J-221X	MG RESISTOR		
	R 404	NRSA63J-221X	MG RESISTOR		
	R 405	NRSA63J-221X	MG RESISTOR		
	R 406	NRSA63J-221X	MG RESISTOR		
	R 407	NRSA63J-221X	MG RESISTOR		
	R 408	NRSA63J-221X	MG RESISTOR		
	R 415	NRSA63J-221X	MG RESISTOR		
	R 418	NRSA63J-101X	MG RESISTOR		
	R 419	NRSA63J-103X	MG RESISTOR		
	R 420	NRSA63J-221X	MG RESISTOR		
	R 423	NRSA63F-102X	MG RESISTOR		
	R 424	NRSA63J-153X	MG RESISTOR		
	R 425	NRSA63F-102X	MG RESISTOR		
	R 426	NRSA63J-103X	MG RESISTOR		
	R 427	NRSA63J-103X	MG RESISTOR		
	R 428	NRSA63J-472X	MG RESISTOR		
	R 429	NRSA63J-101X	MG RESISTOR		
	R 430	NRSA63J-103X	MG RESISTOR		
	R 431	NRSA63J-225X	MG RESISTOR		
	R 432	NRSA63J-472X	MG RESISTOR		
	R 435	NRSA63J-103X	MG RESISTOR		
	R 438	NRSA63J-0R0X	MG RESISTOR		
	R 441	NRSA63J-221X	MG RESISTOR		
	R 443	NRSA63J-221X	MG RESISTOR		
	R 444	NRSA63J-221X	MG RESISTOR		
	R 445	NRSA63J-221X	MG RESISTOR		
	R 446	NRSA63J-221X	MG RESISTOR		
	R 447	NRSA63J-221X	MG RESISTOR		
	R 448	NRSA63J-221X	MG RESISTOR		
	R 449	NRSA63J-221X	MG RESISTOR		
	R 450	NRSA63J-221X	MG RESISTOR		
	R 451	NRSA63J-103X	MG RESISTOR		
	R 452	NRSA63J-432X	MG RESISTOR		
	R 453	NRSA63J-432X	MG RESISTOR		
	R 454	NRSA63J-432X	MG RESISTOR		
	R 455	NRSA63J-822X	MG RESISTOR		
	R 456	NRSA63J-822X	MG RESISTOR		
	R 457	NRSA63J-822X	MG RESISTOR		
	R 458	NRSA63J-103X	MG RESISTOR		
	R 459	NRSA63J-102X	MG RESISTOR		
	R 461	NRSA63J-432X	MG RESISTOR		
	R 462	NRSA63J-822X	MG RESISTOR		
	R 463	NRSA63J-0R0X	MG RESISTOR		
	R 464	NRSA63J-103X	MG RESISTOR		
	R 465	NRSA63J-0R0X	MG RESISTOR		
	R 466	NRSA63J-103X	MG RESISTOR		
	R 467	NRSA63J-103X	MG RESISTOR		
	R 468	NRSA63J-103X	MG RESISTOR		
	R 471	NRSA63J-102X	MG RESISTOR		
	R 472	NRSA63J-102X	MG RESISTOR		
	R 473	NRSA63J-102X	MG RESISTOR		
	R 474	NRSA63J-102X	MG RESISTOR		
	R 475	NRSA63J-102X	MG RESISTOR		
	R 476	NRSA63J-102X	MG RESISTOR		

■ **Electrical parts list (DSP/Audio board)** **Block No. 03**

⚠	Item	Parts number	Parts name	Remarks	Area
	R 481	NRSA63J-222X	MG RESISTOR		
	R 482	NRSA63J-103X	MG RESISTOR		
	R 483	NRSA63J-105X	MG RESISTOR		
	R 491	NRSA63J-0R0X	MG RESISTOR		
	R 492	NRSA63J-0R0X	MG RESISTOR		
	R1101	NRSA63J-471X	MG RESISTOR		
	R1102	NRSA63J-471X	MG RESISTOR		
	R1103	NRSA63J-564X	MG RESISTOR		
	R1104	NRSA63J-564X	MG RESISTOR		
	R1121	NRSA63J-103X	MG RESISTOR		
	R1122	NRSA63J-103X	MG RESISTOR		
	R1123	NRSA63J-103X	MG RESISTOR		
	R1131	NRSA63J-104X	MG RESISTOR		
	R1132	NRSA63J-104X	MG RESISTOR		
	R1133	NRSA63J-102X	MG RESISTOR		
	R1134	NRSA63J-102X	MG RESISTOR		
	R1135	NRSA63J-332X	MG RESISTOR		
	R1136	NRSA63J-332X	MG RESISTOR		
	R1137	NRSA63J-104X	MG RESISTOR		
	R1138	NRSA63J-104X	MG RESISTOR		
	R1139	NRSA63J-104X	MG RESISTOR		
	R1140	NRSA63J-104X	MG RESISTOR		
	R1141	NRSA63J-102X	MG RESISTOR		
	R1142	NRSA63J-102X	MG RESISTOR		
	R1143	NRSA63J-332X	MG RESISTOR		
	R1144	NRSA63J-332X	MG RESISTOR		
	R1145	NRSA63J-104X	MG RESISTOR		
	R1146	NRSA63J-104X	MG RESISTOR		
	R1147	NRSA63J-104X	MG RESISTOR		
	R1148	NRSA63J-104X	MG RESISTOR		
	R1149	NRSA63J-471X	MG RESISTOR		
	R1150	NRSA63J-102X	MG RESISTOR		
	R1151	NRSA63J-472X	MG RESISTOR		
	R1152	NRSA63J-332X	MG RESISTOR		
	R1153	NRSA63J-471X	MG RESISTOR		
	R1154	NRSA63J-472X	MG RESISTOR		
	R1155	NRSA63J-104X	MG RESISTOR		
	R1156	NRSA63J-104X	MG RESISTOR		
	R1157	NRSA63J-332X	MG RESISTOR		
	R1158	NRSA63J-104X	MG RESISTOR		
	R1161	NRSA63J-104X	MG RESISTOR		
	R1162	NRSA63J-104X	MG RESISTOR		
	R1163	NRSA63J-104X	MG RESISTOR		
	R1164	NRSA63J-104X	MG RESISTOR		
	R1165	NRSA63J-104X	MG RESISTOR		
	R1166	NRSA63J-104X	MG RESISTOR		
	R1167	NRSA63J-332X	MG RESISTOR		
	R1168	NRSA63J-332X	MG RESISTOR		
	R1169	NRSA63J-393X	MG RESISTOR		
	R1170	NRSA63J-393X	MG RESISTOR		
	R1171	NRSA63J-332X	MG RESISTOR		
	R1172	NRSA63J-332X	MG RESISTOR		
	R1173	NRSA63J-393X	MG RESISTOR		
	R1174	NRSA63J-393X	MG RESISTOR		
	R1175	NRSA63J-332X	MG RESISTOR		
	R1176	NRSA63J-393X	MG RESISTOR		
	R1197	NRSA63J-474X	MG RESISTOR		
	R1201	NRSA63J-124X	MG RESISTOR		
	R1202	NRSA63J-124X	MG RESISTOR		
	R1251	NRSA63J-223X	MG RESISTOR		
	R1252	NRSA63J-223X	MG RESISTOR		
	R2501	NRSA63J-103X	MG RESISTOR		
	R2502	NRSA63J-103X	MG RESISTOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	R2503	NRSA63J-513X	MG RESISTOR		
	R2504	NRSA63J-513X	MG RESISTOR		
	R2507	NRSA63J-103X	MG RESISTOR		
	R2508	NRSA63J-103X	MG RESISTOR		
	R2509	NRSA63J-103X	MG RESISTOR		
	R2510	NRSA63J-103X	MG RESISTOR		
	R2513	NRSA63J-103X	MG RESISTOR		
	R2514	NRSA63J-103X	MG RESISTOR		
	R2515	NRSA63J-103X	MG RESISTOR		
	R2516	NRSA63J-103X	MG RESISTOR		
	R2517	NRSA63J-102X	MG RESISTOR		
	R2518	NRSA63J-102X	MG RESISTOR		
	R2519	NRSA63J-102X	MG RESISTOR		
	R2520	NRSA63J-102X	MG RESISTOR		
	R2525	NRSA63J-102X	MG RESISTOR		
	R2526	NRSA63J-102X	MG RESISTOR		
	R2527	NRSA63J-104X	MG RESISTOR		
	R2528	NRSA63J-104X	MG RESISTOR		
	R2529	NRSA63J-103X	MG RESISTOR		
	R2530	NRSA63J-103X	MG RESISTOR		
	R2531	NRSA63J-104X	MG RESISTOR		
	R2532	NRSA63J-104X	MG RESISTOR		
	R2533	NRSA63J-223X	MG RESISTOR		
	R2534	NRSA63J-223X	MG RESISTOR		
	R2535	NRSA63J-563X	MG RESISTOR		
	R2536	NRSA63J-563X	MG RESISTOR		
	R2537	NRSA63J-104X	MG RESISTOR		
	R2538	NRSA63J-104X	MG RESISTOR		
	R2561	NRSA63J-104X	MG RESISTOR		
	R2562	NRSA63J-104X	MG RESISTOR		
	R2563	NRSA63J-103X	MG RESISTOR		
	R2564	NRSA63J-103X	MG RESISTOR		
	R2565	NRSA63J-392X	MG RESISTOR		
	R2566	NRSA63J-392X	MG RESISTOR		
	R2567	NRSA63J-103X	MG RESISTOR		
	R2568	NRSA63J-103X	MG RESISTOR		
	R2575	NRSA63J-102X	MG RESISTOR		
	R2576	NRSA63J-102X	MG RESISTOR		
	R2577	NRSA63J-104X	MG RESISTOR		
	R2578	NRSA63J-104X	MG RESISTOR		
	R2579	NRSA63J-104X	MG RESISTOR		
	R2580	NRSA63J-104X	MG RESISTOR		
	R2581	NRSA63J-104X	MG RESISTOR		
	R2582	NRSA63J-104X	MG RESISTOR		
	R2583	NRSA63J-103X	MG RESISTOR		
	R2584	NRSA63J-124X	MG RESISTOR		
	R2585	NRSA63J-392X	MG RESISTOR		
	R2586	NRSA63J-123X	MG RESISTOR		
	R2587	NRSA63J-103X	MG RESISTOR		
	R2588	NRSA63J-103X	MG RESISTOR		
	R2590	NRSA63J-333X	MG RESISTOR		
	R2592	NRSA63J-333X	MG RESISTOR		
	R2594	NRSA63J-333X	MG RESISTOR		
	R2595	NRSA63J-102X	MG RESISTOR		
	R2596	NRSA63J-102X	MG RESISTOR		
	R2597	NRSA63J-104X	MG RESISTOR		
	R2598	NRSA63J-104X	MG RESISTOR		
	R2599	NRSA63J-104X	MG RESISTOR		
	R2600	NRSA63J-104X	MG RESISTOR		
	X 401	NAX0385-001X	CRYSTAL	22.5792MHZ	
	X 402	NAX0275-001X	1COSCIALLATOR	6.14MHZ	

■ **Electrical parts list (DVD servo board)** **Block No. 04**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 105	NEA70JM-476X	E.CAPACITOR		
	C 106	NEA70JM-476X	E.CAPACITOR		
	C 109	NCB31CK-104X	C CAPACITOR		
	C 110	NCS31HJ-221X	C.CAPA. C.M		
	C 111	NCB31CK-104X	C CAPACITOR		
	C 112	NCB31CK-104X	C CAPACITOR		
	C 113	NEA70JM-226X	E CAPACITOR		
	C 115	NCB31CK-104X	C CAPACITOR		
	C 116	NCB31CK-104X	C CAPACITOR		
	C 117	NCB31CK-473X	C CAPACITOR		
	C 118	NCB31CK-273X	C CAPACITOR		
	C 119	NCB31HK-561X	C CAPACITOR		
	C 120	NCB31HK-561X	C CAPACITOR		
	C 121	NCB31CK-104X	C CAPACITOR		
	C 122	NCS31HJ-120X	C.CAPA. C.M		
	C 123	NCB31CK-104X	C CAPACITOR		
	C 124	NCS31HJ-470X	C.CAPA. C.M		
	C 125	NCB31HK-271X	C CAPACITOR		
	C 126	NCB31CK-104X	C CAPACITOR		
	C 127	NCB31CK-104X	C CAPACITOR		
	C 128	NCB31CK-104X	C CAPACITOR		
	C 129	NCB31HK-472X	C CAPACITOR		
	C 135	NEA70JM-476X	E.CAPACITOR		
	C 137	NEA70GM-476X	E.CAPA. C.M.		
	C 138	NCB31CK-104X	C CAPACITOR		
	C 139	NCB31CK-104X	C CAPACITOR		
	C 141	NCB31CK-104X	C CAPACITOR		
	C 142	NCB31CK-104X	C CAPACITOR		
	C 143	NCB31CK-104X	C CAPACITOR		
	C 144	NCB31CK-103X	C CAPACITOR		
	C 146	NCB31CK-104X	C CAPACITOR		
	C 201	NEA70JM-226X	E CAPACITOR		
	C 203	NCB31CK-104X	C CAPACITOR		
	C 204	NCB31CK-104X	C CAPACITOR		
	C 205	NCS31HJ-121X	C CAPACITOR		
	C 207	NCB31HK-391X	C CAPACITOR		
	C 208	NCB31HK-391X	C CAPACITOR		
	C 211	NCB31HK-223X	C CAPACITOR		
	C 212	NCB31CK-103X	C CAPACITOR		
	C 215	NCB31CK-104X	C CAPACITOR		
	C 217	NCB31CK-104X	C CAPACITOR		
	C 251	NCB31CK-104X	C CAPACITOR		
	C 252	NEA71AM-336X	E CAPACITOR		
	C 253	NCB31CK-104X	C CAPACITOR		
	C 255	NCB31CK-153X	C CAPACITOR		
	C 256	NCB31CK-104X	C CAPACITOR		
	C 257	NCB31CK-104X	C CAPACITOR		
	C 258	NCB31CK-104X	C CAPACITOR		
	C 259	NCB31CK-104X	C CAPACITOR		
	C 260	NCB31CK-104X	C CAPACITOR		
	C 261	NCB31CK-104X	C CAPACITOR		
	C 262	NCB31CK-104X	C CAPACITOR		
	C 263	NCB31CK-104X	C CAPACITOR		
	C 264	NCB31CK-103X	C CAPACITOR		
	C 301	NCB31CK-104X	C CAPACITOR		
	C 302	NCB31CK-104X	C CAPACITOR		
	C 303	NCB31CK-104X	C CAPACITOR		
	C 304	NEA70GM-107X	E CAPACITOR		
	C 306	NEA70GM-107X	E CAPACITOR		
	C 308	NEA70GM-107X	E CAPACITOR		
	C 310	NCB31CK-104X	C CAPACITOR		
	C 311	NCB31HK-561X	C CAPACITOR		
	C 312	NCB31HK-561X	C CAPACITOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	C 313	NCB31HK-561X	C CAPACITOR		
	C 314	NCB31HK-331X	C CAPACITOR		
	C 315	NCB31HK-471X	C CAPACITOR		
	C 316	NCB31HK-271X	C CAPACITOR		
	C 317	NCS31HJ-121X	C CAPACITOR		
	C 318	NCB31CK-104X	C CAPACITOR		
	C 319	NCB31HK-102X	C CAPACITOR		
	C 320	NCB31HK-102X	C CAPACITOR		
	C 321	NCB31HK-102X	C CAPACITOR		
	C 322	NCB31HK-562X	C CAPACITOR		
	C 323	NCB31HK-102X	C CAPACITOR		
	C 324	NCB31CK-104X	C CAPACITOR		
	C 325	NCS31HJ-470X	C.CAPA. C.M		
	C 326	NCB31CK-183X	C CAPACITOR		
	C 327	NCB31HK-102X	C CAPACITOR		
	C 328	NCB31CK-104X	C CAPACITOR		
	C 329	NCB31CK-103X	C CAPACITOR		
	C 330	NCB31CK-104X	C CAPACITOR		
	C 331	NCB31CK-103X	C CAPACITOR		
	C 332	NCB21CK-105X	C CAPACITOR		
	C 333	NCB31CK-104X	C CAPACITOR		
	C 334	NCB31CK-104X	C CAPACITOR		
	C 337	NCB31CK-104X	C CAPACITOR		
	C 338	NCB31CK-104X	C CAPACITOR		
	C 339	NCB31CK-104X	C CAPACITOR		
	C 340	NCB31CK-104X	C CAPACITOR		
	C 341	NCB31CK-104X	C CAPACITOR		
	C 342	NCB31CK-104X	C CAPACITOR		
	C 343	NCB31CK-104X	C CAPACITOR		
	C 344	NCB31CK-104X	C CAPACITOR		
	C 345	NCB31CK-104X	C CAPACITOR		
	C 346	NCB31CK-104X	C CAPACITOR		
	C 347	NCB31CK-104X	C CAPACITOR		
	C 348	NCB31CK-104X	C CAPACITOR		
	C 349	NCB31CK-104X	C CAPACITOR		
	C 350	NCB31CK-104X	C CAPACITOR		
	C 401	NEA70GM-476X	E.CAPA. C.M.		
	C 402	NCB31CK-104X	C CAPACITOR		
	C 403	NCB31CK-104X	C CAPACITOR		
	C 404	NCB31CK-104X	C CAPACITOR		
	C 405	NCB31CK-104X	C CAPACITOR		
	C 406	NCB31CK-104X	C CAPACITOR		
	C 407	NCB31CK-104X	C CAPACITOR		
	C 450	NCB31CK-104X	C CAPACITOR		
	C 501	NCB31CK-104X	C CAPACITOR		
	C 504	NEA70GM-476X	E.CAPA. C.M.		
	C 505	NCB31CK-104X	C CAPACITOR		
	C 507	NCS31HJ-3R0X	C CAPACITOR		
	C 508	NCB31CK-104X	C CAPACITOR		
	C 511	NEA70GM-476X	E.CAPA. C.M.		
	C 512	NCB31CK-104X	C CAPACITOR		
	C 514	NCB31CK-104X	C CAPACITOR		
	C 515	NCB31CK-104X	C CAPACITOR		
	C 516	NCB31CK-104X	C CAPACITOR		
	C 517	NCB31CK-104X	C CAPACITOR		
	C 518	NCB31CK-104X	C CAPACITOR		
	C 519	NCB31CK-104X	C CAPACITOR		
	C 520	NCB31CK-104X	C CAPACITOR		
	C 523	NCB31CK-104X	C CAPACITOR		
	C 524	NEA70GM-476X	E.CAPA. C.M.		
	C 527	NEA70GM-476X	E.CAPA. C.M.		
	C 528	NCB31CK-104X	C CAPACITOR		
	C 529	NCB31CK-104X	C CAPACITOR		

■ **Electrical parts list (DVD servo board)** **Block No. 04**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 531	NCB31CK-104X	C CAPACITOR		
	C 532	NCB31CK-104X	C CAPACITOR		
	C 533	NCB31CK-104X	C CAPACITOR		
	C 534	NCB31CK-104X	C CAPACITOR		
	C 535	NCB31CK-104X	C CAPACITOR		
	C 536	NCB31CK-104X	C CAPACITOR		
	C 539	NCB31CK-104X	C CAPACITOR		
	C 540	NCB31CK-104X	C CAPACITOR		
	C 541	NCB31CK-104X	C CAPACITOR		
	C 542	NCB31CK-104X	C CAPACITOR		
	C 543	NCB31CK-104X	C CAPACITOR		
	C 544	NCB31CK-104X	C CAPACITOR		
	C 545	NCB31CK-104X	C CAPACITOR		
	C 547	NCB31CK-104X	C CAPACITOR		
	C 548	NCB31CK-104X	C CAPACITOR		
	C 549	NEA70GM-476X	E.CAPA. C.M.		
	C 550	NCB31CK-104X	C CAPACITOR		
	C 554	NCB31CK-104X	C CAPACITOR		
	C 555	NCB31CK-104X	C CAPACITOR		
	C 557	NCB31CK-104X	C CAPACITOR		
	C 558	NCB11CK-105X	C CAPACITOR		
	C 569	NCB31CK-104X	C CAPACITOR		
	C 571	NEA70GM-476X	E.CAPA. C.M.		
	C 572	NCB31CK-104X	C CAPACITOR		
	C 573	NEA70GM-227X	E.CAPA, C.M		
	C 578	NCB31CK-104X	C CAPACITOR		
	C 580	NEA70GM-476X	E.CAPA. C.M.		
	C 581	NEA70GM-227X	E.CAPA, C.M		
	C 582	NEA70GM-476X	E.CAPA. C.M.		
	C 601	NEA70GM-476X	E.CAPA. C.M.		
	C 602	NEA70GM-476X	E.CAPA. C.M.		
	C 618	NCB31CK-104X	C CAPACITOR		
	C 619	NCB31CK-104X	C CAPACITOR		
	C 902	NCB31CK-104X	C CAPACITOR		
	C 904	NCB31CK-104X	C CAPACITOR		
	C 906	NCB31CK-104X	C CAPACITOR		
	C 908	NCB31CK-104X	C CAPACITOR		
	C 992	NCB31CK-104X	C CAPACITOR		
	C 993	NCB31CK-104X	C CAPACITOR		
	C 994	NCB31CK-104X	C CAPACITOR		
	C 995	NCB31CK-104X	C CAPACITOR		
	C 996	NCB31CK-104X	C CAPACITOR		
	C 997	NCB31CK-104X	C CAPACITOR		
	C 998	NCB31CK-104X	C CAPACITOR		
	CN101	QGF0523F1-30W	FFC/FPC CONNE	PU	
	CN201	QGF1016F2-15W	CONNECTOR	SP&STP	
	CN202	QGF1016F2-07W	CONNECTOR	LOADER	
	CN502	QGB2027L1-26X	CONNECTOR	SYSTEM	
	CN503	QGB2027L1-26X	CONNECTOR	VIDEO	
	D 101	RB521S-30-X	SB DIODE		
	D 202	1SS355-X	DIODE C.M		
	IC101	AN8703FH-V	IC		
	IC201	BA5983FM-X	IC		
	IC251	BA6664FM-X	LSI		
	IC301	MN103S26EGA	IC		
	IC401	MN102L62GLF1	IC		
	IC451	S-93C66AFJ-X	IC		
	IC501	NDV8601VWA-BB	IC		
	IC502	CY24203SC-X	IC		
	IC505	K4S643232E-TC60	IC		
	IC509	SST39VF160-7CEK	IC (FLASH)		
	IC510	AK93C65AF-X	IC C.M		
	IC511	LM1117MP1.8-X	IC		

⚠	Item	Parts number	Parts name	Remarks	Area
	IC512	74LCX373MTC-X	IC(DIGITAL)		
	IC513	74LCX373MTC-X	IC(DIGITAL)		
	IC521	MM74HCT32MTC-X	IC		
	IC522	74LCX32MTC-X	IC(DIGITAL)		
	IC523	NC7SZ125P5-X	IC(DIGITAL)		
	K 101	NQR0007-002X	FERRITE BEADS		
	K 301	NQR0007-002X	FERRITE BEADS		
	K 302	NQR0007-002X	FERRITE BEADS		
	K 303	NQR0007-002X	FERRITE BEADS		
	K 304	NQR0007-002X	FERRITE BEADS		
	K 401	NQR0007-002X	FERRITE BEADS		
	K 501	NQR0007-002X	FERRITE BEADS		
	K 502	NQR0007-002X	FERRITE BEADS		
	K 504	NQR0007-002X	FERRITE BEADS		
	K 505	NQR0007-002X	FERRITE BEADS		
	K 507	NQR0007-002X	FERRITE BEADS		
	K 508	NQR0007-002X	FERRITE BEADS		
	K 509	NQR0007-002X	FERRITE BEADS		
	K 510	NQR0007-002X	FERRITE BEADS		
	K 513	NQR0007-002X	FERRITE BEADS		
	K 519	NQR0007-002X	FERRITE BEADS		
	K 520	NQR0007-002X	FERRITE BEADS		
	K 556	NQR0129-002X	FERRITE BEADS		
	K 557	NQR0129-002X	FERRITE BEADS		
	K 558	NQR0129-002X	FERRITE BEADS		
	K 559	NQR0129-002X	FERRITE BEADS		
	L 501	NQL044K-100X	INDUCTOR		
	Q 101	KTA1001/Y/-X	TRANSISTOR		
	Q 102	KTA1001/Y/-X	TRANSISTOR		
	Q 103	DTA144EE-X	DIGI TRANSISTOR		
	Q 501	2SB1424/QR/-X	TRANSISTOR		
	Q 502	2SC2412K/RS/-X	CHIP TRANSISTOR		
	R 101	NRSA63J-333X	MG RESISTOR		
	R 102	NRSA63J-223X	MG RESISTOR		
	R 103	NRSA63J-223X	MG RESISTOR		
	R 104	NRS125J-270X	MG RESISTOR		
	R 105	NRS125J-270X	MG RESISTOR		
	R 106	NRSA63J-273X	MG RESISTOR		
	R 107	NRSA63J-273X	MG RESISTOR		
	R 108	NRSA63J-222X	MG RESISTOR		
	R 109	NRSA63J-182X	MG RESISTOR		
	R 110	NRSA63J-333X	MG RESISTOR		
	R 111	NRVA63D-243X	RES. C.M		
	R 112	NRSA63J-822X	MG RESISTOR		
	R 113	NRSA63J-103X	MG RESISTOR		
	R 114	NRSA63J-0R0X	MG RESISTOR		
	R 115	NRSA63J-0R0X	MG RESISTOR		
	R 116	NRSA63J-0R0X	MG RESISTOR		
	R 117	NRSA63J-0R0X	MG RESISTOR		
	R 119	NRSA63J-2R2X	MG RESISTOR		
	R 120	NRSA63J-2R2X	MG RESISTOR		
	R 125	NRSA63J-105X	MG RESISTOR		
	R 126	NRSA63J-105X	MG RESISTOR		
	R 127	NRSA63J-222X	MG RESISTOR		
	R 128	NRS125J-1R0X	MG RESISTOR		
	R 129	NRS125J-1R0X	MG RESISTOR		
	R 130	NRSA63J-182X	MG RESISTOR		
	R 201	NRSA63J-470X	MG RESISTOR		
	R 202	NRS125J-1R0X	MG RESISTOR		
	R 203	NRSA63J-0R0X	MG RESISTOR		
	R 204	NRSA63J-273X	MG RESISTOR		
	R 205	NRSA63J-273X	MG RESISTOR		
	R 206	NRSA63J-303X	MG RESISTOR		

■ **Electrical parts list (DVD servo board)** **Block No. 04**

⚠	Item	Parts number	Parts name	Remarks	Area
	R 207	NRSA63J-473X	MG RESISTOR		
	R 208	NRSA63J-223X	MG RESISTOR		
	R 209	NRSA63J-223X	MG RESISTOR		
	R 210	NRSA63J-222X	MG RESISTOR		
	R 211	NRSA63J-222X	MG RESISTOR		
	R 212	NRSA63J-103X	MG RESISTOR		
	R 213	NRSA63J-103X	MG RESISTOR		
	R 214	NRSA63J-103X	MG RESISTOR		
	R 215	NRSA63J-103X	MG RESISTOR		
	R 216	NRSA63J-912X	MG RESISTOR		
	R 217	NRSA63J-181X	MG RESISTOR		
	R 218	NRSA63J-221X	MG RESISTOR		
	R 219	NRSA63J-183X	MG RESISTOR		
	R 220	NRSA63J-243X	MG RESISTOR		
	R 221	NRSA63J-682X	MG RESISTOR		
	R 222	NRSA63J-103X	MG RESISTOR		
	R 223	NRSA63J-912X	MG RESISTOR		
	R 224	NRSA63J-103X	MG RESISTOR		
	R 228	NRSA63J-0R0X	MG RESISTOR		
	R 229	NRSA63J-332X	MG RESISTOR		
	R 251	NRS125J-R47X	MG RESISTOR		
	R 252	NRSA63J-2R2X	MG RESISTOR		
	R 253	NRSA63J-0R0X	MG RESISTOR		
	R 254	NRSA63J-203X	MG RESISTOR		
	R 255	NRSA63J-103X	MG RESISTOR		
	R 256	NRSA63J-470X	MG RESISTOR		
	R 258	NRSA63J-0R0X	MG RESISTOR		
	R 259	NRSA63J-103X	MG RESISTOR		
	R 301	NRSA63J-473X	MG RESISTOR		
	R 302	NRSA63J-473X	MG RESISTOR		
	R 303	NRSA63J-473X	MG RESISTOR		
	R 304	NRSA63J-473X	MG RESISTOR		
	R 305	NRSA63J-473X	MG RESISTOR		
	R 306	NRSA63J-473X	MG RESISTOR		
	R 307	NRSA63J-473X	MG RESISTOR		
	R 308	NRSA63J-0R0X	MG RESISTOR		
	R 309	NRSA63J-473X	MG RESISTOR		
	R 313	NRSA63J-473X	MG RESISTOR		
	R 317	NRSA63J-473X	MG RESISTOR		
	R 319	NRSA63J-473X	MG RESISTOR		
	R 321	NRSA63J-473X	MG RESISTOR		
	R 323	NRSA63J-473X	MG RESISTOR		
	R 324	NRSA63J-473X	MG RESISTOR		
	R 325	NRSA63J-123X	MG RESISTOR		
	R 326	NRSA63J-473X	MG RESISTOR		
	R 327	NRSA63J-105X	MG RESISTOR		
	R 328	NRSA63J-153X	MG RESISTOR		
	R 329	NRSA63J-473X	MG RESISTOR		
	R 330	NRSA63J-473X	MG RESISTOR		
	R 331	NRSA63J-473X	MG RESISTOR		
	R 332	NRSA63J-102X	MG RESISTOR		
	R 333	NRSA63J-183X	MG RESISTOR		
	R 334	NRSA63J-102X	MG RESISTOR		
	R 336	NRSA63J-273X	MG RESISTOR		
	R 337	NRSA63J-273X	MG RESISTOR		
	R 338	NRSA63J-472X	MG RESISTOR		
	R 339	NRSA63J-472X	MG RESISTOR		
	R 340	NRSA63J-103X	MG RESISTOR		
	R 341	NRSA63J-562X	MG RESISTOR		
	R 402	NRSA63J-472X	MG RESISTOR		
	R 411	NRSA63J-472X	MG RESISTOR		
	R 413	NRSA63J-472X	MG RESISTOR		
	R 414	NRSA63J-472X	MG RESISTOR		
	R 421	NRSA63J-0R0X	MG RESISTOR		
	R 422	NRSA63J-472X	MG RESISTOR		
	R 423	NRSA63J-472X	MG RESISTOR		
	R 424	NRSA63J-472X	MG RESISTOR		
	R 427	NRSA63J-0R0X	MG RESISTOR		
	R 428	NRSA63J-472X	MG RESISTOR		
	R 501	NRSA63J-470X	MG RESISTOR		
	R 504	NRSA63J-103X	MG RESISTOR		
	R 509	NRSA63J-103X	MG RESISTOR		
	R 510	NRSA63J-0R0X	MG RESISTOR		
	R 511	NRSA63J-0R0X	MG RESISTOR		
	R 512	NRSA63J-332X	MG RESISTOR		
	R 513	NRSA63J-330X	MG RESISTOR		
	R 521	NRSA63J-103X	MG RESISTOR		
	R 531	NRSA63J-562X	MG RESISTOR		
	R 532	NRSA63J-392X	MG RESISTOR		
	R 533	NRSA63J-102X	MG RESISTOR		
	R 534	NRSA63J-561X	MG RESISTOR		
	R 535	NRSA63J-333X	MG RESISTOR		
	R 536	NRSA63J-102X	MG RESISTOR		
	R 541	NRSA63J-0R0X	MG RESISTOR		
	R 543	NRSA63J-0R0X	MG RESISTOR		
	R 544	NRSA63J-471X	MG RESISTOR		
	R 547	NRSA63J-0R0X	MG RESISTOR		
	R 551	NRSA63J-0R0X	MG RESISTOR		
	R 552	NRSA63J-0R0X	MG RESISTOR		
	R 553	NRSA63J-0R0X	MG RESISTOR		
	R 565	NRVA63D-622X	CMF RESISTOR		
	R 566	NRVA63D-132X	MG.RESI C.M		
	R 570	NRSA63J-100X	MG RESISTOR		
	R 573	NRSA63J-162X	MG RESISTOR		
	R 574	NRSA63J-162X	MG RESISTOR		
	R 583	NRSA63J-471X	MG RESISTOR		
	R 584	NRSA63J-332X	MG RESISTOR		
	R 608	NRSA63J-103X	MG RESISTOR		
	R 655	NRSA63J-0R0X	MG RESISTOR		
	R 738	NRSA63J-152X	MG RESISTOR		
	R 739	NRSA63J-0R0X	MG RESISTOR		
	R 740	NRSA63J-0R0X	MG RESISTOR		
	R 991	NRSA63J-220X	MG RESISTOR		
	X 571	NAX0513-001X	CRYSTAL		

■ **Electrical parts list (DVD loading switch board)** **Block No. 05**

⚠	Item	Parts number	Parts name	Remarks	Area
	CN101	QGA1501F2-04W	CONNECTER		
	CN102	QGF1016F2-07W	CONNECTOR		
	CN103	QGA1501F2-02W	CONNECTOR		
	CN104	QGA1501F2-04W	CONNECTER		
	D 101	GL100MN0MP1/M/X	PHOTO DIODE		
	Q 101	PT100MF0MP1-X	PHOTO TR		
	R 101	NRSA63J-181X	MG RESISTOR		
	S 101	NSW0174-001X	PUSH SW		
	S 102	NSW0174-001X	PUSH SW		

■ **Electrical parts list (SP-THV70 Main board)** **Block No. 06**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 202	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 203	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 204	QFVF1HJ-184Z	MF CAPACITOR	.18MF 5% 50V	
	C 205	QFN31HJ-393Z	M CAPACITOR	.039MF 5% 50V	
	C 206	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 207	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 208	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 209	QFN31HJ-471Z	M CAPACITOR	470PF 5% 50V	
	C 210	QTE1H06-475Z	E CAPACITOR		
	C 211	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 212	QETN1HM-107Z	E CAPACITOR	100MF 20% 50V	
	C 213	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 214	QETN1HM-476Z	E CAPACITOR	47MF 20% 50V	
	C 215	QCS31HJ-3R0Z	C CAPACITOR	3.0PF 5% 50V	
	C 216	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 217	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 218	QFVF1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C 219	QFVF1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C 223	QCSB1HJ-100Y	C CAPACITOR	10PF 5% 50V	
	C 225	QETN2AM-226Z	E CAPA I/M	22MF 20% 100V	
	C 226	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 227	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 228	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 229	QFN31HJ-223Z	M CAPACITOR	.022MF 5% 50V	
	C 230	QFN31HJ-223Z	M CAPACITOR	.022MF 5% 50V	
	C 231	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 232	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 233	QFV61HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 300	QFN31HJ-471Z	M CAPACITOR	470PF 5% 50V	
	C 301	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 302	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C 303	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V	
	C 304	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 305	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 306	QCSB1HK-3R3Y	C CAPACITOR	3.3PF 10% 50V	
	C 307	QFVF1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C 308	QFVF1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C 309	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 310	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V	
	C 311	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 312	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C 313	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 314	QFN31HJ-471Z	M CAPACITOR	470PF 5% 50V	
	C 315	QCSB1HK-3R3Y	C CAPACITOR	3.3PF 10% 50V	
	C 316	QFVF1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C 317	QFVF1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C 318	QFN31HJ-471Z	M CAPACITOR	470PF 5% 50V	
	C 319	QTE1H06-475Z	E CAPACITOR		
	C 320	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C 321	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 322	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 323	QCSB1HK-3R3Y	C CAPACITOR	3.3PF 10% 50V	
	C 324	QFVF1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C 325	QFVF1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C 326	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 327	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 328	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C 329	QTE1H06-475Z	E CAPACITOR		
	C 330	QFN31HJ-471Z	M CAPACITOR	470PF 5% 50V	
	C 331	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V	
	C 332	QCSB1HK-3R3Y	C CAPACITOR	3.3PF 10% 50V	
	C 333	QFVF1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C 334	QFVF1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C 335	QFN31HJ-471Z	M CAPACITOR	470PF 5% 50V	
	C 336	QTE1H06-475Z	E CAPACITOR		
	C 337	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C 338	QCSB1HK-3R3Y	C CAPACITOR	3.3PF 10% 50V	
	C 339	QFVF1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C 340	QFVF1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C 350	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V	
	C 351	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V	
	C 352	QFN31HJ-392Z	M CAPACITOR	3900PF 5% 50V	
	C 353	QFN31HJ-392Z	M CAPACITOR	3900PF 5% 50V	
⚠	C 400	QCZ9105-472	C CAPACITOR	4700PF	
	C 412	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	CN102	QGB2510K2-06	CONNECTOR		
	CN103	QGB2510K2-14	CONNECTOR		
	CN105	QGB2510K2-20	SOCKET		
	CN106	QGB2510K2-14	CONNECTOR		
⚠	CN107	QGA7901C1-02	CONNECTOR		
⚠	CN108	QGA7901C1-02	CONNECTOR		
	CN109	QGA3901F2-04	CONNECTOR		
	CN110	QGB2510K2-10	CONNECTOR		
	CN111	QGB2510K2-12	CONNECTOR		
	D 202	1SS133-T2	228ZIODE IM		
	D 203	1SS133-T2	228ZIODE IM		
⚠	D 204	1N5402M-20	DIODE		
	D 205	MTZJ15C-T2	Z DIODE		
	D 206	MTZJ6.2B-T2	ZENER DIODE		
	D 207	1SS133-T2	228ZIODE IM		
	D 208	SLR-325MG-T	LED I M		
	D 209	SLR-325MG-T	LED I M		
	D 210	1SS133-T2	228ZIODE IM		
	D 211	1SS133-T2	228ZIODE IM		
	D 212	MTZJ6.2B-T2	ZENER DIODE		
	D 214	MTZJ15C-T2	Z DIODE		
⚠	D 215	1N5402M-20	DIODE		
	D 216	1SS133-T2	228ZIODE IM		
	D 217	MTZJ6.2B-T2	ZENER DIODE		
	D 218	1SS133-T2	228ZIODE IM		
	D 219	1SS133-T2	228ZIODE IM		
	D 300	1SS133-T2	228ZIODE IM		
	D 301	1SS133-T2	228ZIODE IM		
	D 302	1SS133-T2	228ZIODE IM		
	D 303	1SS133-T2	228ZIODE IM		
	D 304	1SS133-T2	228ZIODE IM		
	D 400	1SS133-T2	228ZIODE IM		
	D 401	1SR35-400A-T5	DIODE I/M		
	IC104	BA15218N	IC		
⚠	IC105	STK404-130	IC		
⚠	IC106	STK402-030	IC		
⚠	IC107	STK402-230	IC		
	IC201	BA15218N	IC		
	IC202	BA15218N	IC		
	J 101	QNB0065-002	SPK TERMINAL		
	J 102	QNB0070-002	SPK TERMINAL		
	L 200	QQLZ003-1R0	INDUCTOR		
	L 300	QQLZ003-1R0	INDUCTOR		
	L 301	QQLZ003-1R0	INDUCTOR		
	L 302	QQLZ003-1R0	INDUCTOR		
	L 303	QQLZ003-1R0	INDUCTOR		
	L 304	QQLZ003-1R0	INDUCTOR		
	MR200	QRZ0197-R22	C RESISTOR	1/1W	
	Q 202	2SA1038S/SE/-T	TRANSISTOR		
⚠	Q 204	2SK2937	FET		
	Q 205	KRA111M-T	D.TR.I.M		

■ **Electrical parts list (SP-THV70 Main board)** **Block No. 06**

⚠	Item	Parts number	Parts name	Remarks	Area
	Q 206	2SC2389S/SE/-T	TRANSISTOR		
	Q 207	2SA1038S/SE/-T	TRANSISTOR		
⚠	Q 208	2SK2937	FET		
	Q 209	2SC2389S/SE/-T	TRANSISTOR		
	Q 210	2SK373(O,Y)	FET I/M		
	Q 211	KRC111M-T	TR I/M		
	Q 300	KTA1267/YG/-T	TRANSISTOR		
	Q 301	KTA1267/YG/-T	TRANSISTOR		
	Q 302	KTA1267/YG/-T	TRANSISTOR		
	Q 303	KTA1267/YG/-T	TRANSISTOR		
	Q 304	KTA1267/YG/-T	TRANSISTOR		
	R 200	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 201	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 208	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 209	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 210	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 211	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 212	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 213	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 214	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 215	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R 216	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R 217	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
⚠	R 218	QRZ9015-221X	F RESISTOR	220 1/4W	
⚠	R 219	QRZ9015-221X	F RESISTOR	220 1/4W	
	R 220	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 221	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 222	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 223	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 224	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 225	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
⚠	R 226	QRK126J-4R7X	C RESISTOR	4.7 5% 1/2W	
	R 227	QRE141J-4R7Y	C RESISTOR	4.7 5% 1/4W	
	R 230	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R 231	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 235	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 236	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 237	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 238	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 239	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 240	QRE141J-823Y	C RESISTOR	82K 5% 1/4W	
	R 241	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 242	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 243	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 244	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 245	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 246	QRE141J-823Y	C RESISTOR	82K 5% 1/4W	
	R 247	QRE141J-394Y	C RESISTOR	390K 5% 1/4W	
	R 248	QRE141J-334Y	C RESISTOR	330K 5% 1/4W	
	R 249	QRE141J-475Y	C RESISTOR	4.7M 5% 1/4W	
	R 250	QRE141J-475Y	C RESISTOR	4.7M 5% 1/4W	
	R 251	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 252	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 253	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 254	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 255	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 256	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 257	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 258	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 259	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 260	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 261	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 262	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	

⚠	Item	Parts number	Parts name	Remarks	Area
	R 263	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 264	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 265	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 266	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 267	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 268	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 269	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 270	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 271	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 272	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 273	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 274	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 275	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 276	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 277	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 300	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 301	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 302	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
⚠	R 303	QRZ9015-101X	F RESISTOR	100 1/4W	
	R 304	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
⚠	R 305	QRT012J-R22	UNF.MF.RES.	5% 1/1W	
⚠	R 306	QRT012J-R22	UNF.MF.RES.	5% 1/1W	
	R 307	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 308	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 309	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R 310	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
⚠	R 311	QRK126J-4R7X	C RESISTOR	4.7 5% 1/2W	
	R 312	QRE141J-4R7Y	C RESISTOR	4.7 5% 1/4W	
⚠	R 313	QRT012J-R22	UNF.MF.RES.	5% 1/1W	
⚠	R 314	QRT012J-R22	UNF.MF.RES.	5% 1/1W	
⚠	R 315	QRZ9015-101X	F RESISTOR	100 1/4W	
	R 316	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R 317	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 318	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 319	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
⚠	R 320	QRK126J-4R7X	C RESISTOR	4.7 5% 1/2W	
	R 321	QRE141J-4R7Y	C RESISTOR	4.7 5% 1/4W	
	R 322	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 323	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 324	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R 325	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 326	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 327	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
⚠	R 328	QRZ9015-101X	F RESISTOR	100 1/4W	
	R 329	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
⚠	R 330	QRT012J-R22	UNF.MF.RES.	5% 1/1W	
⚠	R 331	QRT012J-R22	UNF.MF.RES.	5% 1/1W	
	R 332	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 333	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 334	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R 335	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
⚠	R 336	QRK126J-4R7X	C RESISTOR	4.7 5% 1/2W	
	R 337	QRE141J-4R7Y	C RESISTOR	4.7 5% 1/4W	
⚠	R 338	QRT012J-R22	UNF.MF.RES.	5% 1/1W	
⚠	R 339	QRT012J-R22	UNF.MF.RES.	5% 1/1W	
⚠	R 340	QRZ9015-101X	F RESISTOR	100 1/4W	
	R 341	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R 342	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 343	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 344	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
⚠	R 345	QRK126J-4R7X	C RESISTOR	4.7 5% 1/2W	
	R 346	QRE141J-4R7Y	C RESISTOR	4.7 5% 1/4W	
	R 347	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	

■ **Electrical parts list (SP-THV70 Main board)** **Block No. 06**

⚠	Item	Parts number	Parts name	Remarks	Area
	R 348	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R 349	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 350	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 351	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 352	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
⚠	R 353	QRT012J-R22	UNF.MF.RES.	5% 1/1W	
⚠	R 354	QRT012J-R22	UNF.MF.RES.	5% 1/1W	
	R 355	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 356	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 357	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R 358	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
⚠	R 359	QRK126J-4R7X	C RESISTOR	4.7 5% 1/2W	
	R 360	QRE141J-4R7Y	C RESISTOR	4.7 5% 1/4W	
	R 370	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R 371	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R 372	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R 373	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R 374	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R 375	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 376	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 377	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 378	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 379	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
⚠	RY400	QSK0055-001	RELAY		
	RY401	QSK0109-001	RELAY		
	RY402	QSK0109-001	RELAY		
	RY403	QSK0109-001	RELAY		
⚠	Z 400	QNG0020-001Z	FUSE CLIP		
⚠	Z 401	QNG0020-001Z	FUSE CLIP		

■ **Electrical parts list (SP-THV70 Sub board)** **Block No. 07**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 100	QTE1H06-475Z	E CAPACITOR		
	C 101	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C 102	QTE1H06-475Z	E CAPACITOR		
	C 103	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C 104	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 105	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C 106	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 107	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 108	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V	
	C 109	QTE1H06-475Z	E CAPACITOR		
	C 110	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 111	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V	
	C 112	QTE1H06-475Z	E CAPACITOR		
	C 113	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 114	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V	
	C 115	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C 116	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 118	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 119	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 120	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C 121	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C 122	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C 123	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C 124	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C 125	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C 126	QCSB1HJ-100Y	C CAPACITOR	10PF 5% 50V	
	C 128	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 129	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 500	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 501	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 502	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 503	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 504	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 505	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 506	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 507	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 508	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 509	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 510	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 511	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 512	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 513	QFVF1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 514	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 515	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 516	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 517	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C 518	QETN1EM-107Z	E CAPACITOR	100MF 20% 25V	
	C 519	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C 520	QEZ0223-478	E CAPACITOR	4700MF	
	C 521	QEZ0223-478	E CAPACITOR	4700MF	
	C 522	QETM1EM-688	E CAPACITOR	6800MF 20% 25V	
	C 523	QETM1EM-688	E CAPACITOR	6800MF 20% 25V	
	C 524	QFLC2AJ-104Z	M CAPACITOR	.10MF 5% 100V	
	C 525	QFLC2AJ-104Z	M CAPACITOR	.10MF 5% 100V	
	C 526	QFLC2AJ-104Z	M CAPACITOR	.10MF 5% 100V	
	C 527	QFLC2AJ-104Z	M CAPACITOR	.10MF 5% 100V	
	C 528	QFLC2AJ-104Z	M CAPACITOR	.10MF 5% 100V	
	C 529	QFLC2AJ-104Z	M CAPACITOR	.10MF 5% 100V	
	C 530	QETN1CM-227Z	E CAPACITOR	220MF 20% 16V	
	C 531	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 532	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 533	QETN1EM-476Z	E CAPACITOR	47MF 20% 25V	
	C 550	QETN1HM-335Z	E CAPACITOR	3.3MF 20% 50V	

⚠	Item	Parts number	Parts name	Remarks	Area
	C 551	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 552	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 553	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 554	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 555	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 556	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 557	QFN31HJ-103Z	M CAPACITOR	.010MF 5% 50V	
	C 558	QETN1HM-226Z	E CAPACITOR	22MF 20% 50V	
	CN101	QGB2510K2-12	CONNECTOR		
	CN104	QGA3901C1-05	CONNECTOR		
	CN201	QGB2510J1-12	CONNECTOR		
	CN202	QGB2510J1-06	CONNECTOR		
	CN203	QGB2510J1-14	CONNECTOR		
	CN205	QGB2510J1-20	CONNECTOR		
	CN206	QGB2510J1-14	CONNECTOR		
	CN210	QGB2510J1-10	CONNECTOR		
	CN211	QGB2510J1-12	CONNECTOR		
	D 500	1SS133-T2	228ZIODE IM		
	D 501	1SS133-T2	228ZIODE IM		
	D 502	MTZJ5.1C-T2	ZENER DIODE		
	D 503	1SS133-T2	228ZIODE IM		
	D 504	1SS133-T2	228ZIODE IM		
	D 505	1SS133-T2	228ZIODE IM		
	D 506	MTZJ30C-T2	ZENER DIODE		
	D 508	MTZJ5.1B-T2	ZENER DIODE		
	D 509	MTZJ12C-T2	ZENER DIODE		
	D 510	MTZJ12C-T2	ZENER DIODE		
⚠	D 511	1N5402M-20	DIODE		
⚠	D 512	1N5402M-20	DIODE		
⚠	D 513	1N5402M-20	DIODE		
⚠	D 514	1N5402M-20	DIODE		
⚠	D 515	6A20G-E4	DIODE		
⚠	D 516	6A20G-E4	DIODE		
⚠	D 517	6A20G-E4	DIODE		
⚠	D 518	6A20G-E4	DIODE		
	D 519	1SS133-T2	228ZIODE IM		
	D 520	1SS133-T2	228ZIODE IM		
	D 521	1SS133-T2	228ZIODE IM		
	D 522	1SS133-T2	228ZIODE IM		
	D 523	MTZJ15C-T2	Z DIODE		
	D 524	MTZJ6.2B-T2	ZENER DIODE		
	D 525	MTZJ6.2B-T2	ZENER DIODE		
	D 526	MTZJ15C-T2	Z DIODE		
	D 527	1SS133-T2	228ZIODE IM		
	D 528	1SS133-T2	228ZIODE IM		
	D 530	1SS133-T2	228ZIODE IM		
	D 531	1SS133-T2	228ZIODE IM		
	D 532	MTZJ30C-T2	ZENER DIODE		
	D 533	MTZJ6.2B-T2	ZENER DIODE		
	D 534	1SS133-T2	228ZIODE IM		
	D 535	MTZJ15C-T2	Z DIODE		
	D 536	1SS133-T2	228ZIODE IM		
	IC100	BA3121	IC		
	IC101	BA3121	IC		
	IC102	BA3121	IC		
	IC103	BA15218N	IC		
	IC108	BA15218N	IC		
	IC109	BA15218N	IC		
	IC110	BA15218N	IC		
	J 100	QND0079-001	DIN CONNECTOR		
	K 100	QQR0621-001Z	FERRITE BEADS		
	K 101	QQR0621-001Z	FERRITE BEADS		
	Q 500	KRA104M-T	D.TR.I.M		

■ **Electrical parts list (SP-THV70 Sub board)** **Block No. 07**

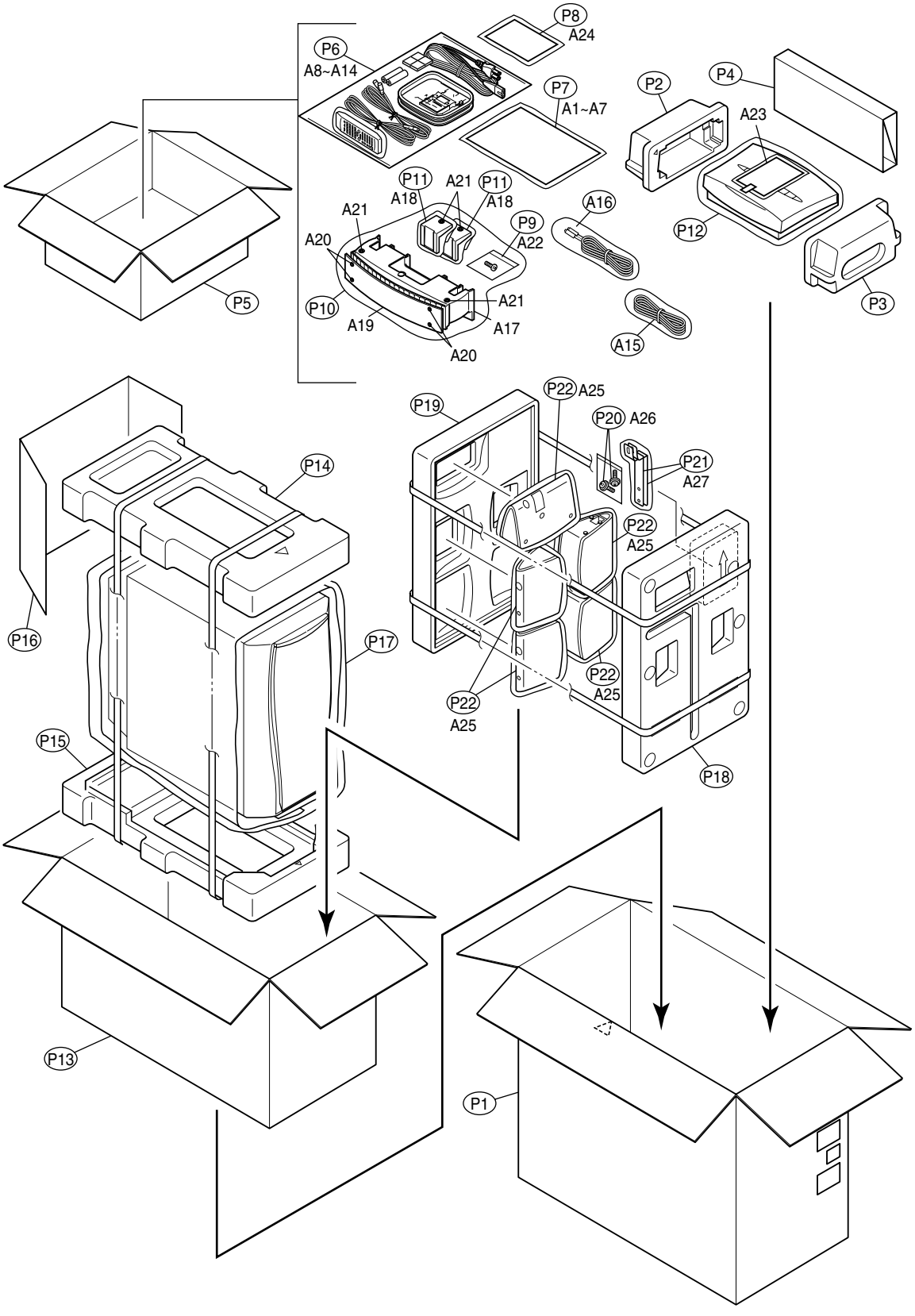
⚠	Item	Parts number	Parts name	Remarks	Area
	Q 501	KRC102M-T	D.TRANSISTOR		
	Q 502	KTA1267/YG/-T	TRANSISTOR		
	Q 503	KRC102M-T	D.TRANSISTOR		
	Q 504	KTC3199/GL/-T	TRANSISTOR		
	Q 505	KRC102M-T	D.TRANSISTOR		
⚠	Q 506	2SD2037/EF/-T	TRANSISTOR		
⚠	Q 507	2SA1359/OY/	TRANSISTOR		
	Q 508	KTC3199/GL/-T	TRANSISTOR		
	Q 509	KTC3199/GL/-T	TRANSISTOR		
	Q 510	KRA102M-T	D.TRANSISTOR		
	Q 511	KTC3199/GL/-T	TRANSISTOR		
	Q 512	KTC3199/GL/-T	TRANSISTOR		
	Q 513	KRC104M-T	D.TR.I.M		
	Q 514	DTC115ESA-T	D.TR.I.M		
	Q 515	KTC3199/GL/-T	TRANSISTOR		
	Q 516	KTA1267/YG/-T	TRANSISTOR		
	Q 517	KTC3199/GL/-T	TRANSISTOR		
	Q 518	KRA111M-T	D.TR.I.M		
	Q 519	KRA111M-T	D.TR.I.M		
	Q 520	2SK373(O,Y)	FET I/M		
	Q 521	2SK373(O,Y)	FET I/M		
	Q 522	KTC3199/GL/-T	TRANSISTOR		
	Q 523	KRA104M-T	D.TR.I.M		
	R 100	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 102	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 104	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 106	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 108	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 110	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 112	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 113	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 114	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 115	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 116	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 118	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 119	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 121	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 122	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 123	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 124	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 130	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 132	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
	R 133	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 134	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 135	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 136	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 137	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 138	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 139	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R 500	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R 501	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R 502	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 504	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 505	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R 506	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R 507	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R 508	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R 509	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 510	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 511	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R 512	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R 513	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R 514	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	

⚠	Item	Parts number	Parts name	Remarks	Area
	R 515	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 516	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
⚠	R 517	QRZ9005-100X	F RESISTOR	10 1/4W	
	R 518	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 519	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
⚠	R 520	QRZ9005-100X	F RESISTOR	10 1/4W	
	R 521	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 522	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 523	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 524	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
⚠	R 525	QRL012J-271	UNF OMF.RES	270 5% 1/1W	
	R 526	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R 527	QRE141J-331Y	C RESISTOR	330 5% 1/4W	
	R 528	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 529	QRE141J-753Y	C RESISTOR	75K 5% 1/4W	
	R 530	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 531	QRE141J-753Y	C RESISTOR	75K 5% 1/4W	
	R 532	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 533	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 534	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 535	QRE141J-224Y	C RESISTOR	220K 5% 1/4W	
⚠	R 536	QRZ9006-4R7X	F RESISTOR	4.7 1/4W	
	R 537	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 538	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 539	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 540	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 541	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 542	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 543	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 544	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 545	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 546	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 547	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 548	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 549	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 550	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 551	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 552	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 553	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 554	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 555	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 556	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 557	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 558	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 559	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 560	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 561	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 562	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 563	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 564	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 565	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 566	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 567	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 568	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 570	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	S 100	QSW0834-001	PUSH SWITCH		
	VR100	QVQ0021-B14	V RESISTOR		
	Z 500	QNG0020-001Z	FUSE CLIP		
	Z 501	QNG0020-001Z	FUSE CLIP		
	Z 502	QNG0020-001Z	FUSE CLIP		
	Z 503	QNG0020-001Z	FUSE CLIP		

Packing materials and accessories parts list

Block No. M 3 M M

Block No. M 5 M M



■ Parts list (Packing)

Block No. M3MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	LV33672-006A	CARTON BOX	1		
	P 2	GV10099-001A	CUSHION(L)	1		
	P 3	GV10099-002A	CUSHION(R)	1		
	P 4	LV33593-001A	CARTON SPACER	1		
	P 5	LV33471-001A	ACCESSORY BOX	1		
	P 6	QPA01703503P	POLY BAG	1	FOR ACC	
	P 7	QPA02503503P	POLY BAG	1	FOR INST BOOK	
	P 8	QPA01702503P	POLY BAG	1		C
	P 9	QPA00801505	POLY BAG	1	FOR SCREW	
	P 10	GV30364-001A	POLY BAG	1		
	P 11	QPA01001505	ENVELOPE	2		
	P 12	QPC04504515P	POLY BAG	1	FOR SET	
	P 13	LV31492-018A	CARTON	1		
	P 14	LV21230-001A	PACKING PAD	1		
	P 15	LV21230-002A	PACKING PAD	1		
	P 16	LV42058-001A	CARTON SHEET	1		
	P 17	QPA08009005P	POLY BAG	1		
	P 18	8000048101	TOP CUSHION	1		
	P 19	8000048111	BOTTOM CUSHION	1		
	P 20	8500035721	POLY BAG	1		
	P 21	8500035701	POLY BAG	2		
	P 22	8500032771	POLY BAG	5		

■ Parts list (Accessories)

Block No. M5MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	LVT0865-002A	INST.BOOK	1	ENG,FRE	C
		LVT0865-001B	INST BOOK	1	ENG	J
	A 2	BT-51028-2	J=REGIST CARD	1		J
	A 3	YU20333	SAFETY INST.	1		
	A 4	LV43147-002A	CAUTION SHEET	1		J
	A 5	BT-20071B	SERVICE NETWORK	1		C
	A 6	GV40352-001A	PAPER PATTERN	1	(9 LANGUAGE)	
	A 7	LV43129-002A	SUPPLE SHEET	1		
⚠	A 8	QMPE090-183-JD	POWER CORD	1		
	A 9	QAM0423-002	VIDEO CABLE	1		
	A 10	QAL0432-001	ANT.WIRE	1		
	A 11	QAL0014-001	AM LOOP ANT	1		
	A 12	RM-STHV70J	REMOCON UNIT	1		
	A 13	R6SPTT-2STSM	BATTERY	2		
	A 14	EWP805-001W	REMOTE WIRE	1		
	A 15	LV42980-001A	SPK CORD ASSY	1		
	A 16	QAM0381-001	SYSTEM CABLE	1		
	A 17	GV10097-002A	STAND BASE	1		
	A 18	GV30248-002A	STAND LEG	2		
	A 19	GV20158-002A	STAND LENS	1		
	A 20	LV41587-001A	SPECIAL SCREW	4	S.LENS+S.BASE	
	A 21	GV40270-001A	FOOT	4	STAND BASE&LEG	
	A 22	QYSBST3010Z	T.SCREW	1	INTO STAND ASS'Y	
	A 23	GV40351-001A	CAUTION SHEET	1		
	A 24	BT-52006-1	WARRANTY CARD	1		C
	A 25	SP-XCV70K	SPEAKER BOX	1		
	A 26	SP-XSV70K	SPEAKER BOX	4		
	A 27	7200036311	BOLT	2		
	A 28	6400020001	BRACKET	2		